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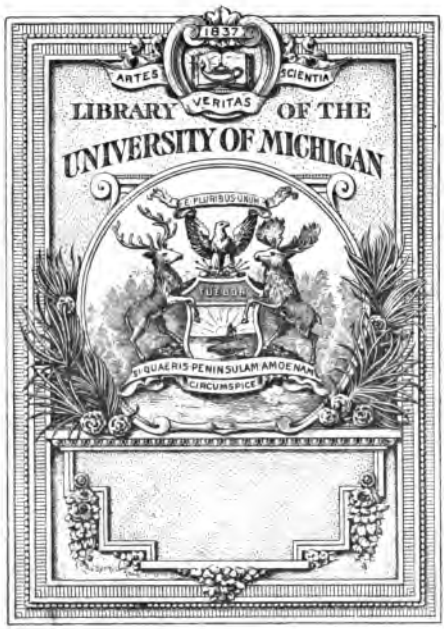
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PRESIDENTS OF THE SOCIETY.

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1867 Sir THOMAS WATSON, Bart., M.D., F.R.S., D.C.L.

1869 Sir JAMES PAGET, Bart., F.R.S., D.C.L.

1871 Sir WILLIAM GULL, Bart., M.D., F.R.S., D.C.L.

1873 PRESCOTT GARDNER HEWETT, F.R.S.

1875 SIR WILLIAM JENNER, Bart., M.D., K.C.B., F.R.S., D.C.L.

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PIRRIE, WILLIAM, M.D., L.R.C.S.Ed., Professor of Surgery at the University of Aberdeen, &c.

STOKES, WILLIAM, M.D., D.C.L., LL.D., F.R.S., Regius Professor of Physic at Dublin University, &c.

FOREIGN HONORARY MEMBERS.

BILLROTH, THEODOR, M.D., Professor of Surgery in the University of Vienna.

CHARCOT, J. M., M.D., Physician to the Hôpital de la Salpêtrière.

FLINT, AUSTIN. M.D., Senr., Professor of Medicine in the Bellevue Hospital, Medical College, New York.

FRERICHS, FRIED. THEOD., M.D., Professor of Clinical Medicine in the University of Berlin.

GROSS, SAMUEL D., M.D., F.C.P. Philad., D.C.L. Oxon., Professor of Surgery in the Jefferson Medical College of Philadelphia.

LANGENBECK, BERNHARD VON, M.D., Professor of Surgery in the University of Berlin.

RICORD, PHILIPPE, M.D., Ex-Surgeon in Chief of the Hôpital du Midi, and late President of the Academy of Medicine, Paris.

ZIEMSSEN, H. VON, M.D., Professor of Clinical Medicine at Erlangen.

*** *Members are requested to inform the Secretaries of any Corrections when necessary.*

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(V.P.) *Vice-President.* (S.) *Secretary.*
(C.) *Member of Council.*

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1870 †ALLBUTT, THOMAS CLIFFORD, M.D., F.L.S., Lecturer on the Practice of Physic at the Leeds School of Medicine, and Physician to the Leeds General Infirmary: 38 Park Square, Leeds.

1871 ALTHAUS, JULIUS, M.D.: 18 Bryanston Street, Portman Square, W.

1868 ANDERSON, JOHN FORD, M.D.: 28 Buckland Crescent, Belsize Park, N.W.

Orig Memb ANDREW, JAMES, M.D., Physician to, and Lecturer on Medicine at, St. Bartholomew's Hospital: 22 Harley Street, Cavendish Square, W. (C. 1872–4.)

Orig Memb ARNOTT, HENRY (C.), Assistant Surgeon to St. Thomas's Hospital: 28 Brook Street, Grosvenor Square, W. (C. 1872–5.)

Orig Memb BAKER, W. MORRANT, Assistant Surgeon to, and Lecturer on Physiology and General Anatomy at, St. Bartholomew's Hospital; Surgeon to the Evelina Hospital for Sick Children: 26 Wimpole Street, Cavendish Square, W. (C. 1873.)

1868 BANTOCK, GEORGE GRANVILLE, M.D.: 44 Cornwall Road, Westbourne Park, W.

ELECTED

Orig Memb BARCLAY, ANDREW WHYTE, M.D., Physician to, and Lecturer on Medicine at, St. George's Hospital; Medical Officer of Health for Chelsea: 23A Bruton Street, Berkeley Square, W. (C. 1870–1.)

1869 BARKER, EDGAR (C.): 21 Hyde Park Street, W. (C. 1875.)

1875 BARLOW, THOMAS, M.B, Assistant Physician to the Hospital for Sick Children, Great Ormond Street: 1 Bartholomew Villas, N.W.

Orig Memb BARWELL, RICHARD (C.), Surgeon to the Charing Cross Hospital: 32 George Street, Hanover Square, W. (C. 1872–5.)

Orig Memb BASHAM, WILLIAM RICHARD, M.D., Senior Physician to, and Lecturer on Medicine at, the Westminster Hospital: 17 Chester Street, Grosvenor Place, S.W.

Orig Memb BASTIAN, HENRY CHARLTON, M.D., F.R.S., Physician to University College Hospital, and Assistant Physician to the National Hospital for the Paralysed and Epileptic, and Professor of Pathological Anatomy at University College: 20 Queen Anne Street, W.

1868 BAÜMLER, CHRISTIAN G. H., M.D., Professor of Materia Medica at the University of Erlangen.

1875 BECK, MARCUS, M.S., Assistant Surgeon to University College Hospital: 30 Wimpole Street, Cavendish Square, W.

1868 BEIGEL, HERMANN, M.D., 2 Lichtenstein Strasse, Vienna.

1871 BENNETT, JAMES RISDON, M.D., F.R.S., Consulting Physician to St. Thomas's Hospital, and to the City of London Hospital for Diseases of the Chest: 15 Finsbury Square, E.C.

1874 BENNETT, WILLIAM HENRY, St. George's Hospital, Hyde Park Corner, S.W.

1870 BLOXAM, JOHN ASTLEY, Assistant Surgeon to Charing Cross Hospital: 8 George Street, Hanover Square, W.

1868 BRACE, WILLIAM H., M.D.: 7 Queen's Gate Terrace, Kensington, W.

1868 BRIGHT, JOHN MEABURN, M.D.: Forest Hill, S.E.

1868 BRIGHT, GEORGE CHARLES, M.B.: 29 Lüttichen Strasse, Dresden.

Orig Memb BRISTOWE, JOHN S., M.D., Physician to, and Lecturer on Medicine at, St. Thomas's Hospital; Medical Officer of Health for Camberwell: 11 Old Burlington Street, W. (C. 1869–70.)

ELECTED

Orig Memb BROADBENT, WILLIAM HENRY, M.D., Physician to, and Joint Lecturer on Medicine at, St. Mary's Hospital; Physician to the London Fever Hospital: 34 Seymour Street, Portman Square, W. (C. 1871–3.)

Orig Memb BRODHURST, BERNARD EDWARD, Surgeon to the Royal Orthopædic Hospital: 20 Grosvenor Street, W.

1875 BROWN, CHARLES ROBERT, M.D.: Beckenham, Kent.

1874 BROWN, GEORGE, North Eastern Children's Hospital: 327 Hackney Road East, N.E.

Orig Memb BRYANT, THOMAS, Surgeon to Guy's Hospital: 53 Upper Brook Street, Grosvenor Square, W. (C. 1872.)

Orig Memb BUCHANAN, GEORGE, M.D., Medical Inspector to H.M. Privy Council: 24 Nottingham Place, W.

1868 †BURTON, JOHN M.: Lee Park, Blackheath, S.E.

1871 BUTT, WILLIAM F.: 12 South Street, Park Lane, W.

Orig Memb BUZZARD, THOMAS, M.D. (C.), Physician to the National Hospital for the Paralysed and Epileptic: 56 Grosvenor Street, W. (S. 1870–2, C. 1873–5.)

Orig Memb CALLENDER, GEORGE WILLIAM, F.R.S. (V.P.), Surgeon to, and Lecturer on Surgery at, St. Bartholomew's Hospital: 7 Queen Anne Street, Cavendish Square, W. (S. 1867–70, C. 1871, V.P. 1872–5.)

1868 CARR, WILLIAM, M.D.: Lee Grove, Blackheath, S.E.

1869 CARTER, ROBERT BRUDENELL (C.), Ophthalmic Surgeon to, and Lecturer on Ophthalmology at, St. George's Hospital; Surgeon to the Royal South London Ophthalmic Hospital: 69 Wimpole Street, W. (C. 1873–5.)

1870 CASSON, JOHN HORNSEY: Ashbourne, Derbyshire.

1868 CAVAFY, JOHN, M.D., Assistant Physician to, and Lecturer on Physiology at, St. George's Hospital; Physician to the Victoria Hospital for Children: 13 Arlington Street, Piccadilly, W.

Orig Memb CAYLEY, WILLIAM, M.D. (C.), Assistant Physician to, and Lecturer on Pathological Anatomy at, the Middlesex Hospital: 58 Welbeck Street, W. (C. 1874–5.)

Orig Memb CHAMBERS, THOMAS KING, M.D., Honorary Physician to H.R.H. the Prince of Wales; Consulting Physician to, and Lecturer on Medicine at, St. Mary's Hospital: 24 Mount Street, Grosvenor Square, W. (V.P. 1870–2.)

1873 CHISHOLM, EDWIN: Camden, near Sydney, New South Wales.

1868 CHOLMELEY, WILLIAM, M.D., Physician to the Great Northern Hospital, and Margaret Street Infirmary for Consumption: 63 Grosvenor Street, W. (C. 1871–3.).

ELECTED

Orig Memb CHURCH, WILLIAM SELBY, M.D. (C.), Physician to, and Lecturer on Comparative Anatomy at, St. Bartholomew's Hospital: 2 Upper George Street, Bryanston Square, W. (C. 1874–5.)

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1875 COUPLAND, SIDNEY, M.D., Curator and Pathologist at the Middlesex Hospital: 33 Elsham Road, Kensington, W.

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1868 DAY, WILLIAM HENRY, M.D., Physician to the Samaritan Free Hospital for Women and Children: 10 Manchester Square, W.

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ELECTED

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1871 DIVER, EBENEZER, M.D.: Caterham Valley.

1873 DONKIN, ARTHUR SCOTT., M.D.: 60 Welbeck Street, Cavendish Square, W.

Orig Memb DOWN, JOHN LANGDON H., M.D., Physician to, and Lecturer on Medicine at, the London Hospital: 39 Welbeck Street, W. (C. 1870–2.)

1874 DOWSE, THOMAS STRETCH, M.D.: Highgate Infirmary, N.

1868 DRAGE, CHARLES, M.D.: Hatfield, Herts.

Orig Memb DUCKWORTH, DYCE, M.D. (C.), Assistant Physician to St. Bartholomew's Hospital: 11 Grafton Street, Bond Street, W. (C. 1875.)

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1869 DUKE, OLLIVER THOMAS, Assistant Surgeon, Bengal Army, India.

Orig Memb DURHAM, ARTHUR EDWARD, Surgeon to, and Lecturer on Anatomy at, Guy's Hospital: 82 Brook Street, W. (C. 1867-9.)

Orig Memb EDIS, ARTHUR W., M.D., Assistant Obstetric Physician to the Middlesex Hospital: 22 Wimpole Street, Cavendish Square, W.

Orig Memb ERICHSEN, JOHN E., Holme Professor of Clinical Surgery in University College, and Senior Surgeon to University College Hospital: 6 Cavendish Place, Cavendish Square, W. (V.P. 1869–71.)

1868 EVANS, JULIAN, M.B., Assistant Physician, Victoria Hospital for Sick Children: 123 Finborough Road, Redclyffe Square, S.W.

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1868 FAIRBANK, FREDERICK ROYSTON, M.D.: 8 Wood Street, Doncaster.

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ELECTED

1872 FARQUHARSON, ROBERT, M.D., Lecturer on Materia Medica at St. Mary's Hospital: 23 Brook Street, Grosvenor Square, W.

1872 FENWICK, J. C. J., M.B.: 30 Devonshire Street, Portland Place, W.

Orig Memb FERGUSSON, Sir WILLIAM, Bart., F.R.S., Sergeant-Surgeon to H.M. the Queen; Surgeon to King's College Hospital: 16 George Street, Hanover Square, W. (V.P. 1867–70.)

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1868 GLOVER, JAMES GREY, M.D., Hon. Surgeon to the Holloway and North Islington Dispensary: 33 Compton Terrace, Islington, N.

1869 GOODRIDGE, HENRY FREDERICK AUGUSTUS, M.D., Physician to the Bath Royal United Hospital: Bath.

1871 GOVER, ROBERT M., M.B., Medical Officer to the Millbank Prison, Millbank, S.W.

1868 GREEN, THOMAS HENRY, M.D., Physician to, and Lecturer on Pathology at, the Charing Cross Hospital: 74 Wimpole Street, W.

Orig Memb GREENHALGH, ROBERT, M.D., Physician Accoucheur to, and Lecturer on Midwifery at, St. Bartholomew's Hospital: 72 Grosvenor Street, W.

Orig Memb GREENHOW, EDWARD HEADLAM, M.D., F.R.S. (*Treasurer*), Physician to, and Lecturer on Medicine at, the Middlesex Hospital: 14A Manchester Square, W. (T. 1867–75.)

Elected	
1874	Grigg, William Chapman, M.D., Assistant Obstetric Physician to the Westminster Hospital; Physician to the In-Patients, Queen Charlotte's Lying-in Hospital; Assistant Physician to the Victoria Hospital for Children: 6 Curzon Street, Mayfair, W.
1868	†Gueneau de Mussy, Henri, M.D.: 15 Rue du Cirque, Paris.
Orig Memb	Gull, Sir William Withey, Bart., M.D., F.R.S., D.C.L., Physician Extraordinary to the Queen: 74 Brook Street, W. (V.P. 1868–70, P. 1871–2.)
1870	Gwynn, Edmund, M.D.: 10, Hampstead Hill Gardens, N.W.
Orig Memb	Habershon, Samuel Osborne, M.D., Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital: 70 Brook Street, W. (C. 1873.)
1872	Harris, Henry, M.D.: Trengweath, Redruth, Cornwall.
1873	Harley, George, M.D., F.R.S.: 25 Harley Street, Cavendish Square, W.
Orig Memb	Harley, John, M.D., F.L.S. (C.), Assistant Physician to St. Thomas's Hospital: 78 Upper Berkeley Street, Portman Square, W. (C. 1875.)
1873	Harrer, Charles, M.D., Physician to the German Hospital, Eastern Dispensary: 34 City Road, Finsbury Square, E.C.
Orig Memb	Hart, Ernest: 59 Queen Anne Street, W. (C. 1867–8.)
1869	Haward, J. Warrington, Assistant Surgeon to St. George's Hospital; Assistant Surgeon to the Hospital for Sick Children: 5 Montagu Street, Portman Square., W.
Orig Memb	Hawkins, Cæsar Henry, F.R.S., Sergeant-Surgeon to H.M. the Queen, and Consulting Surgeon to St. George's Hospital: 26 Grosvenor Street, W. (V.P. 1867–8.)
1868	Hay, Thomas B.: 43 Caledonian Road, N.
Orig Memb	Heath, Christopher, Surgeon to University College Hospital, and Holme Professor of Clinical Surgery in University College: 36 Cavendish Square, W. (C. 1867–71.)
1868	Heslop, Thomas Pretious, M.D., Physician to the Children's Hospital, Birmingham.
1868	Hewan, Archibald, M.D.: 9 Chester Square, S.W.
Orig Memb	Hewett, Prescott Gardner, F.R.S., Surgeon Extraordinary to H.M. the Queen; Consulting Surgeon to St. George's Hospital: 1 Chesterfield Street, Mayfair, W. (V.P. 1869–71, P. 1873–4.)

ELECTED

Orig Memb HEWITT, GRAILY, M.D., Professor of Midwifery in University College, and Obstetric Physician to University College Hospital: 36 Berkeley Square, W.

Orig Memb HICKS, J. BRAXTON, M.D., F.R.S., F.L.S. (C), Physician Accoucheur to, and Lecturer on Midwifery and the Diseases of Women and Children at, Guy's Hospital: 24 George Street, Hanover Square, W. (C. 1875.)

1868 HILL, BERKELEY, M.B., Surgeon to University College Hospital, Lecturer on Operative Surgery in University College, and Surgeon for out-Patients to the Lock Hospital: 55 Wimpole Street, W. (C. 1870–1.)

1868 HILL, THOMAS HARVEY: 4 Stanhope Terrace, Bayswater, W.

Orig Memb HILTON, JOHN, F.R.S., Surgeon Extraordinary to H.M. the Queen; Consulting Surgeon to Guy's Hospital: 10 New Broad Street, E.C. (V.P. 1867–9.)

1874 HOLDERNESS, WILLIAM BROWN, Surgeon to the Huntingdon County Hospital: Wykeham House, Huntingdon.

1868 †HOLMAN, CONSTANTINE, M.D.: Reigate, Surrey.

1868 HOLMAN, WILLIAM HENRY, M.B.: 68 Adelaide Road South, Hampstead, N.W.

Orig Memb HOLMES, TIMOTHY (V.P.), Surgeon to, and Lecturer on Surgery at, St. George's Hospital; Surgeon-in-Chief to the Metropolitan Police Force: 18 Great Cumberland Place, Hyde Park, W. (C. 1867–9, V.P. 1873–5.)

Orig Memb HOLT, BARNARD WIGHT, Consulting Surgeon to, and Lecturer on Clinical Surgery at, the Westminster Hospital; Medical Officer of Health for Westminster: 14 Savile Row, W.

Orig Memb HOLTHOUSE, CARSTEN, Surgeon to, and Lecturer on Surgery at, the Westminster Hospital; Consulting Surgeon to the South London Ophthalmic Hospital: 3 George Street, Hanover Square, W. (C. 1870–2.)

1873 HOPE, WILLIAM, M.D.: 5 Bolton Row, Mayfair, W.

1871 HOUGHTON, HENRY G., L.K.Q.C.P. Ireland: 6 Mount Street, Grosvenor Square, W.

Orig Memb HULKE, JOHN WHITAKER, F.R.S., Surgeon to, and Lecturer on Practical Surgery at, the Middlesex Hospital, and Surgeon to the Royal London Ophthalmic Hospital: 10 Old Burlington Street, W. (C. 1867–9.)

Orig Memb HUMPHRY, GEORGE MURRAY, M.D., F.R.S., Professor of Anatomy in the University of Cambridge, and Surgeon to Addenbrooke's Hospital, Cambridge. (V.P. 1867–70.)

ELECTED

1871 †HUNT, EZRA: 18 Belmont, Bath.

Orig Memb HUTCHINSON, JONATHAN (V.P.), Surgeon to, and Lecturer on Surgery at, the London Hospital; Surgeon to the Hospital for Diseases of the Skin, and Surgeon to the Royal London Ophthalmic Hospital: 15 Cavendish Square, W. (C. 1867–8, V.P. 1875.)

Orig Memb JACKSON, J. HUGHLINGS, M.D., Physician to, and Lecturer on Physiology at, the London Hospital; Physician to the National Hospital for the Paralysed and Epileptic: 3 Manchester Square, W. (C. 1872–3.)

Orig Memb JENNER, Sir WILLIAM, Bart., M.D., K.C.B., D.C.L., F.R.S. (*President*), Physician in Ordinary to H.M. the Queen and to H.R.H. the Prince of Wales; Physician to University College Hospital: 63 Brook Street, W. (V.P. 1867–70, P. 1875.)

1873 JOHNSON, EDWARD, M.D.: 19 Cavendish Place, W.

Orig Memb JOHNSON, GEORGE, M.D., F.R.S. (V.P.), Physician to King's College Hospital, and Professor of the Principles and Practice of Medicine in King's College: 11 Savile Row, W. (V.P. 1874–5.)

Orig Memb JONES, SYDNEY, M.B., Surgeon to, and Lecturer on Surgery at, St. Thomas's Hospital: 10B St. Thomas's Street, Southwark, S.E. (C. 1867–8.)

1872 JONES, THOMAS, M.D., Assistant Physician, Victoria Hospital for Sick Children: 19 Chapel Street, Belgrave Square, S.W.

Orig Memb KELLY, CHARLES, M.D., Medical Officer of Health for the West Sussex District: Horsham, Sussex.

1868 KESTEVEN, WILLIAM B.: 401 Holloway Road, N. (C. 1870–2.)

1873 LACY, C. DE LACY, Obstetric Assistant, St. George's Hospital.

1868 LANGMORE, JOHN C., M.B. (C.): 20 Oxford Terrace, Hyde Park, W. (C. 1872–5.)

Orig Memb LANGTON, JOHN, Assistant Surgeon to, and Demonstrator of Anatomy at, St. Bartholomew's Hospital: 2 Harley Street, W.

1869 LAWRENCE, JAMES E.: High Street, Wandsworth, S.W.

Orig Memb LAWSON, GEORGE (C.), Surgeon to, and Lecturer on Practical Surgery at, the Middlesex Hospital, and Surgeon to the Royal London Ophthalmic Hospital: 12 Harley Street, W. (S. 1871–3, C. 1874–5.)

1869 LEACH, HARRY, Medical Officer of the Port of London: 42 Lupus Street, St. George's Square, S.W.

ELECTED

Orig Memb LEE, HENRY, Surgeon to, and Lecturer on Clinical Surgery at, St. George's Hospital: 9 Savile Row, W. (V.P. 1870–2.)

1874 LEE, ROBERT JAMES, M.D.: 28 Maddox Street, Bond Street, W.

1868 LITTLE, LOUIS STROMEYER: China.

1872 LIVEING, ROBERT, M.D., Physician to the Middlesex Hospital: 11 Manchester Square, W.

1871 MACCORMAC, WILLIAM, Surgeon to and Joint Lecturer on Surgery at, St. Thomas's Hospital: 13 Harley Street, W.

Orig Memb MACKENZIE, MORELL, M.D., Physician to the Hospital for Diseases of the Throat: 19 Harley Street, Cavendish Square.

1874 MAHOMED, FRED. AKBAR, Resident Medical Officer, London Fever Hospital, Liverpool Road, N.

Orig Memb †MARCET, WILLIAM, M.D., F.R.S.: Villa Bianca, Cannes. (C. 1867–9.)

1868 MARSH, F. HOWARD, Assistant Surgeon to St. Bartholomew's Hospital: 36 Bruton Street, Berkeley Square, W.

Orig Memb MAUNDER, CHARLES F., Surgeon to, and Lecturer on Clinical Surgery, and Demonstrator of Operative Surgery at, the London Hospital: 16 Queen Anne Street, W. (C. 1870–1.)

1868 †MAY, EDWARD HOOPER, M.D.: High Cross, Tottenham, Middlesex, N.

1868 MEADOWS, ALFRED, M.D., Physician Accoucheur to, and Lecturer on Midwifery at, St. Mary's Hospital: 27 George Street, Hanover Square, W. (C. 1871–4.)

1873 MICKLE, WILLIAM JULIUS, M.D., Physician Superintendent, Grove Hall Asylum, Bow, E.

1874 MORGAN, JOHN HAMMOND: 12 Chapel Street, Park Lane, W.

Orig Memb MOXON, WALTER, M.D., F.L.S. (C.), Physician to, and Lecturer on Pathology and Demonstrator of Morbid Anatomy at, Guy's Hospital: 6 Finsbury Circus, E.C. (C. 1874–5.)

Orig Memb MURCHISON, CHARLES, M.D., LL.D., F.R.S., Physician to, and Lecturer on Medicine at, St. Thomas's Hospital, Consulting Physician to the London Fever Hospital: 79 Wimpole Street, W. (C. 1867–9.)

1871 MURRAY, JOHN, M.D., Inspector-General of Hospitals: 17 Westbourne Square, W.

Elected	
1868	Myers, Arthur Bowen Richards, Surgeon to 1st Battalion of the Coldstream Guards: Vincent Square, Westminster, S.W.
1873	Myrtle, Andrew S., M.D.: Harrogate.
1874	Nankivell, Arthur Wolcot, Resident Surgeon, St. Bartholomew's Hospital, Chatham.
Orig Memb	Norton, Arthur Trehern (C.), Assistant Surgeon to, and Lecturer on Anatomy at, St. Mary's Hospital: 6 Wimpole Street, W. (C. 1874–5.)
Orig Memb	Nunn, Thomas William, Surgeon to the Middlesex Hospital: 8 Stratford Place, Oxford Street, W. (C. 1873–4.)
Orig Memb	Ogle, John William, M.D., Physician to St. George's Hospital: 30 Cavendish Square, W. (C. 1867–8.)
1868	†Ogle, William, M.D., Physician to the Derbyshire General Infirmary: 98 Friar Gate, Derby.
1869	Oldfield, E., M.D.: Surinam.
1868	Oppert, Francis, M.D.: Germany.
Orig Memb	Paget, Sir James, Bart., D.C.L., F.R.S., Sergeant-Surgeon Extraordinary to H.M. the Queen; Surgeon in Ordinary to H.R.H. the Prince of Wales; Consulting Surgeon to St. Bartholomew's Hospital: 1 Harewood Place, Hanover Square, W. (V.P. 1867–8, P. 1869–70.)
1873	Parker, Robert William: 15 Bedford Place, Russell Square, W.C.
Orig Memb	Pavy, Frederick William, M.D., F.R.S., Physician to, and Lecturer on Physiology at, Guy's Hospital: 35 Grosvenor Street, W. (C. 1869–71.)
Orig Memb	Peacock, Thomas Bevill, M.D., Physician to St. Thomas's Hospital, Consulting Physician to the City of London Hospital for Diseases of the Chest: 20 Finsbury Circus, E.C. (C. 1867–8, V.P. 1869–71.)
1874	Phillips, Charles Douglas F., M.D.: 107 Lancaster Gate, Hyde Park, W.
Orig Memb	Pick, Thomas Pickering (*Hon. Secretary*), Assistant Surgeon to, and Lecturer on Anatomy at, St. George's Hospital; Surgeon to the Belgrave Hospital for Children: 7 South Eaton Place, Eaton Square, S.W. (S. 1874–5.)
1871	†Playne, Alfred, M.B.: Maidenhead.
Orig Memb	Pollock, A. Julius, M.D., Physician to the Charing Cross Hospital; Physician to the Foundling Hospital: 85 Harley Street, Cavendish Square, W.

Elected	
1875	Pollock, George David, Surgeon in Ordinary to H.R.H. the Prince of Wales; Surgeon to St. George's Hospital: 36 Grosvenor Street, W.
1868	Pollock, James Edward, M.D., Physician to the Hospital for Consumption and Diseases of the Chest: 52 Upper Brook Street, Grosvenor Square, W.
1871	Poore, George Vivian, M.D., Assistant Physician to, and Lecturer on Forensic Medicine at, the Charing Cross Hospital: 30 Wimpole Street, W.
1873	Port, Heinrich, M.D., Assistant Physician to the German Hospital: 10 Finsbury Place North, E.C.
Orig Memb	Powell, R. Douglas, M.D. (C.), Assistant Physician to Charing Cross Hospital; Assistant Physician to the Hospital for Consumption and Diseases of the Chest: 15 Henrietta Street, Cavendish Square, W. (C. 1874–5.)
1868	Prentis, Charles, Assistant Surgeon, Bengal Army.
Orig Memb	Quain, Richard, M.D., F.R.S., Consulting Physician to the Hospital for Consumption and Diseases of the Chest: 67 Harley Street, W. (C. 1867–9.)
Orig Memb	Ramskill, J. Spence, M.D., Physician to, and Lecturer on Medicine at, the London Hospital; Senior Physician to the National Hospital for the Paralysed and Epileptic: 5 St. Helen's Place, Bishopsgate Street, E.C.
1873	Ransford, Gifford: 27 Gloucester Place, Hyde Park, W.
1868	Rasch, Adolphus A., M.D., Physician for Diseases of Women to the German Hospital: 7 South Street, Finsbury Square, E.C.
1874	Ree, Frederick, St. George's Hospital, Hyde Park Corner, S.W.
Orig Memb	Rees, George Owen, M.D., F.R.S., Consulting Physician to Guy's Hospital: 26 Albemarle Street, W. (V.P. 1871–3.)
1868	Reeves, Henry A., Assistant Surgeon to the London Hospital: 27A Finsbury Square, E.C.
1868	Rendle, James D., M.D., Medical Officer to the Government Convict Prison, Brixton: Park Hill, Clapham Park, S.W. (C. 1869–70.)
Orig Memb	Reynolds, John Russell, M.D., F.R.S., Examiner in Medicine at the University of London; Professor of the Principles and Practice of Medicine in University College; Physician to University College Hospital: 38 Grosvenor Street, W. (C. 1867–8.)
1868	Rice, Michael W., M.D.: 8 Sloane Terrace, Sloane Street, S.W.

ELECTED

Orig Memb RINGER, SYDNEY, M.D., Professor of Materia Medica in University College, and Physician to University College Hospital: 15 Cavendish Place, W. (C. 1871–2.)

1873 †ROBERTS, DAVID LLOYD, M.D., Physician to St. Mary's Hospital, Manchester: 23 St. John Street, Manchester.

Orig Memb ROUSE, JAMES (C.), Surgeon to St. George's Hospital, and to the Royal Ophthalmic Hospital, Charing Cross: 2 Wilton Street, Grosvenor Place, S.W. (C. 1875.)

1874 ROWLAND, EDWARD R.: Pelham Lodge, Isleworth.

1868 SANDERSON, HUGH JAMES, M.D.: 26 Upper Berkeley Street, W.

Orig Memb SANDERSON, JOHN BURDON, M.D., F.R.S., Professor of Practical Physiology in University College: 49 Queen Anne Street, W. (S. 1867–9, C. 1870, V.P. 1871–3.)

1873 SAVAGE, GEORGE HENRY, M.D.: Bethlehem Royal Hospital, Lambeth Road, S.E.

1869 SEDGWICK, LEONARD WILLIAM, M.D.: 2 Gloucester Terrace, Hyde Park, W.

Orig Memb SIBLEY, SEPTIMUS WILLIAM: 12 New Burlington Street, W. (C. 1871–4.)

Orig Memb SIBSON, FRANCIS, M.D., F.R.S., Consulting Physician to St. Mary's Hospital: 59 Brook Street, W. (C. 1867–70.)

Orig Memb SIMON, JOHN, D.C.L., F.R.S., Surgeon to St. Thomas's Hospital; Medical Officer of the Privy Council: 40 Kensington Square, W. (V.P. 1867–70.)

1873 SIMPSON, GEORGE M., M.D., C.M.: Hampstead Lane, Highgate.

1872 SLIGHT, GEORGE, M.D.: 25 Brewer Street, Regent Street, W.

1868 SMITH, HEYWOOD, M.D., Physician to the Hospital for Women: 2 Portugal Street, Grosvenor Square, W.

1868 SMITH, PROTHEROE, M.D., Physician to the Hospital for Women: 42 Park Street, Grosvenor Square, W.

Orig Memb SMITH, THOMAS, Surgeon to, and Lecturer on Clinical Surgery at, St. Bartholomew's Hospital, and Surgeon to the Hospital for Sick Children: 5 Stratford Place, Oxford Street, W. (C. 1869–71.)

1873 SMITH, WILLIAM JOHNSON, Surgeon to the Seamen's Hospital, Greenwich.

1873 SMITH, WILLIAM WILBERFORCE, M.D.: 2 Eastbourne Terrace, Bishop's Road, W.

1868 SNOW, WILLIAM V., M.D.: Richmond Gardens, Bournemouth.

ELECTED

Orig Memb SOUTHEY, REGINALD, M.D. (*Hon. Secretary*), Physician to, and Lecturer on Forensic Medicine and Hygiene at, St. Bartholomew's Hospital: 6 Harley Street, Cavendish Square, W. (C. 1867–70, S. 1873–75.)

Orig Memb STEWART, ALEXANDER PATRICK, M.D., Consulting Physician to the Middlesex Hospital: 75 Grosvenor Street, W. (V.P. 1872-74.)

1871 STEWART, WILLIAM EDWARD: 16 Harley Street, Cavendish Square, W.

1874 STIRLING, EDWARD C., M.B.: 34 Queen's Gardens, Bayswater, W.

1872 SUTHERLAND, HENRY, M.D., Lecturer on Insanity, Westminster Hospital: 6 Richmond Terrace, Whitehall, S.W.

1868 SUTRO, SIGISMUND, M.D., Senior Physician to the German Hospital: 37A Finsbury Square, E.C.

Orig Memb SUTTON, HENRY GAWEN, M.B., Physician to, and Lecturer on Pathology at, the London Hospital; and Physician to the City of London Hospital for Diseases of the Chest: 9 Finsbury Square, E.C.

1868 TATHAM, JOHN, M.D., Assistant Physician to the Hospital for Consumption and Diseases of the Chest: 1 Wilton Place, Knightsbridge, S.W.

Orig Memb TEEVAN, WILLIAM F., Surgeon to the West London Hospital: 10 Portman Square, W.

Orig Memb THOMPSON, EDMUND SYMES, M.D., Physician to the Hospital for Consumption and Diseases of the Chest; Gresham Professor of Medicine: 3 Upper George Street, Portman Square, W.

Orig Memb THOMPSON, Sir HENRY, Knt., Surgeon Extraordinary to H.M. the King of the Belgians; Emeritus Professor of Clinical Surgery in University College: 35 Wimpole Street, W. (C. 1867–8.)

Orig Memb THOMPSON, HENRY, M.D. (V.P.), Fellow of St. John's College, Cambridge; Senior Physician to the Middlesex Hospital: 53 Queen Anne Street, W. (V.P. 1875.)

1872 THORNTON, WILLIAM PUGIN, Surgeon to the Hospital for Diseases of the Throat; Surgeon to the Marylebone Dispensary: 42 Devonshire Street, Portland Place.

1868 THOROWGOOD, JOHN C., M.D., Assistant Physician to the City of London Hospital for Diseases of the Chest, and Lecturer on Materia Medica at the Middlesex Hospital: 61 Welbeck Street, W.

1874 TRAVERS, WILLIAM: 2 Phillimore Gardens, Kensington, W.

1868 VENNING, EDGCOMBE, Assistant Surgeon, 1st Life Guards: 87 Sloane Street, S.W.

ELECTED

1869 VERNON, BOWATER J., Ophthalmic Surgeon to St. Bartholomew's Hospital: 44A Wimpole Street, W.

1868 WAGSTAFFE, WILLIAM WARWICK, Assistant Surgeon to St. Thomas's Hospital: 2 Palace Road, Albert Embankment, Westminster Bridge, S.E.

1869 WALKER, JOSEPH, Dental Surgeon to the Westminster Hospital: 22 Grosvenor Street, W.

1870 WARWICK, RICHARD ARCHER, M.D., Surgeon to the Richmond Infirmary: 5 Hill Rise, Richmond, S.W.

1868 WATKINS, EDWIN T., M.D.: 61 Guilford Street, W.C.

Orig Memb WATSON, Sir THOMAS, Bart., M.D., D.C.L., LL.D., F.R.S., Physician in Ordinary to H.M. the Queen; Consulting Physician to King's College Hospital: 16 Henrietta Street, Cavendish Square, W. (P. 1867–8.)

Orig Memb WATSON, WILLIAM SPENCER, M.B., Surgeon to the Royal South London and to the Central London Ophthalmic Hospitals: 7 Henrietta Street, Cavendish Square, W.

Orig Memb WEBER, HERMANN, M.D. (V.P.), Physician to the German Hospital: 10 Grosvenor Street, W. (C. 1867–71, V.P. 1873–5.)

1869 WELLS, J. SOELBERG M.D. (C.), Professor of Ophthalmology at King's College; Ophthalmic Surgeon to King's College Hospital; and Surgeon to the Royal London Ophthalmic Hospital, Moorfields: 16 Savile Row, W. (C. 1875.)

1868 WELLS, THOMAS SPENCER, Surgeon in Ordinary to H.M.'s Household; Surgeon to the Samaritan Free Hospital: 3 Upper Grosvenor Street, W. (C. 1873.)

1874 WHEELHOUSE, CLAUDIUS GALEN, Senior Surgeon to the Leeds General Infirmary, and Lecturer on Surgery, Leeds Medical School: Hilary Place, Leeds.

1868 WHIPHAM, THOMAS TILLYER, M.B., Assistant Physician to, and Curator of Museum at, St. George's Hospital: 37 Green Street, Grosvenor Square, W.

1874 WHISTLER, W.M., M.D.: 80A Brook Street, W.

1871 WIGHT, GEORGE, M.B., C.M.: 428 Liverpool Road, N.

Orig Memb WILKS, SAMUEL, M.D., F.R.S., Physician to, and Lecturer on Medicine at, Guy's Hospital: 77 Grosvenor Street, W. (C. 1871–2.)

Orig Memb WILLETT, ALFRED (C.), Assistant Surgeon to St. Bartholomew's Hospital: 36 Wimpole Street, W. (C. 1872–5.)

ELECTED

Orig Memb WILLIAMS, CHARLES JAMES BLASIUS, M.D., F.R.S., Physician Extraordinary to H.M. the Queen; Consulting Physician to the Hospital for Consumption and Diseases of the Chest: 49 Upper Brook Street, W. (V.P. 1867–70.)

Orig Memb WILLIAMS, CHARLES THEODORE, M.D., Physician to the Hospital for Consumption and Diseases of the Chest: 47 Upper Brook Street, Grosvenor Square, W.

1870 WILLIAMS, WILLIAM RHYS, M.D., Lecturer on Mental Diseases at St. Thomas's Hospital: Bethlehem Royal Hospital, Lambeth Road, S E.

Orig Memb WILLIS, FRANCIS, M.D.: Braceborough, Stamford.

1868 WILTSHIRE, ALFRED, M.D.: Assistant Physician-Accoucheur, St. Mary's Hospital: 57 Wimpole Street, W.

1869 WOLFF, ABRAHAM, Surgeon to the Jews' Deaf and Dumb Home: 48 Gloucester Gardens, Hyde Park, W.

1872 YEO, J. BURNEY, M.D., Assistant Physician to King's College Hospital, and to the Brompton Hospital for Consumption: 44 Hertford Street, May Fair, W.

CLINICAL SOCIETY OF LONDON.—BALANCE SHEET, 1873–4.

1873		£	s.	d.	1874		£	s.	d.
	Balance from last account	126	3	2		By purchase of £83 9s. 10d. 3 per cent. consols	77	2	11
	Arrear of subscriptions for 1872–3	1	1	0		By cost of printing and binding Vol. VII. of 'Transactions'	115	0	0
1874	Subscriptions for 1873–4	196	7	0		Medico-Chirurgical Society for use of rooms	47	5	0
	Admission fees from 17 new resident members	35	14	0		Refreshments and attendance	31	10	0
	Admission fees from 4 new non-resident members	8	8	0		Printing, stationery, postages, &c.	19	10	11
	Composition fees for 'Transactions' from 10 non-resident members	21	0	0		Collecting subscriptions	8	0	0
	January dividend on £216 10s. 2d. 3 per cent. consols	3	4	2		Messrs. Longmans & Co.'s commission and cost of advertising	7	1	9
	July dividend on £300 3 per cent. consols	4	9	3					
	Sale of 'Transactions'	18	6	8					
	Amount of stock standing in the names of the Trustees, Jan. 1, 1875, £300 3 per cent. consols						305	10	7
						Balance due from the Treasurer	109	2	8
		£414	13	3			£414	13	3

E. HEADLAM GREENHOW, *Treasurer.*

Audited and found to be correct, December 11, 1874. THOMAS JONES, WILLIAM HOPE, *Auditors.*

REGINALD SOUTHEY, THOS. P. PICK, *Hon. Secs.*

ADDRESS BY THE PRESIDENT.

SIR WILLIAM JENNER, BART.,

M.D., K.C.B., F.R.S.

GENTLEMEN,—Nothing but a most imperative duty could have prevented me from presiding at the last meeting of the Society. Now that I have the pleasure of taking this chair, I desire first to thank you for the honour you did me when you elected me President of the Clinical Society—one of the highest honours, in my estimation, that can be conferred on a physician. It was not until after I had accepted the nomination that I realised the fact that former presidents had inaugurated the session with an address; and when I realised this—conscious of my own inability to properly discharge that duty—I felt misgivings as to the wisdom of having accepted the honour. I trust to your kindness to overlook my deficiencies.

The Clinical Society was founded for 'the cultivation and promotion of the study of practical medicine and surgery, by the collection of reports of cases, especially of such as bear upon *undetermined* questions in pathology or therapeutics.' A very wide field for study! For, so far as my knowledge extends, there is no disease, even the most common, respecting which there are not undetermined questions in regard of its pathology and its treatment. There is no single disease, however common, respecting which it can be said that its etiology is quite determined (and no report of a case can, clinically, be complete, the etiology of which is not given). There is no disease respecting which it can be said that the symptoms which mark its very outset, its course, its decline,

the symptoms which enable us to tell at its outset what will be its course, the effects which follow after the disease has apparently ended, and the influence which pre-existing conditions of health and disease, as well as that which drugs and other therapeutic agents exert on its progress, termination, and sequelæ, are perfectly known. Respecting all these points, in regard of every disease, even the most common, there are undetermined questions. Many of these questions admit of answer, many of them ought to be answered; and that many of them are not answered is, I think, discreditable to us as a profession. Medicine has made very great progress, and if it were my aim to-night to illustrate that progress, I could find ample material for so doing. Medicine has made great progress; few sciences more. But still, in regard of every disease, in reference to every one of the points I have mentioned, we are wanting facts—facts which could and ought to be supplied. And it is in the hope that my words may stimulate the Fellows of this Society to assist in the collection of these facts, that I would to-night illustrate our present deficiencies, rather than dwell on our past performances.

Let me illustrate my meaning; and first by reference to one or two points in regard of the etiology of a class of the commonest and best studied of acute diseases—I mean the acute specific diseases. In reference to these one may say that they are all contagious—*i.e.* from some part of the sick something is given off which can, when properly applied, excite the same disease in another, and which can excite no other disease. How little is known of what this something is. And yet it is most important for the prevention, and even for the treatment of these diseases, that we should know. How little is known of those conditions of system which render this something sufficient for the production of the disease in one person, while in another it is inert. For example, at a certain time one of these diseases is, as it is called, epidemic. Scarcely a person who has not had it, and is exposed to the emanations from the sick, escapes taking it. On another occasion the disease is not epidemic, and then how many, with equal degrees of exposure, escape. Measles was not epidemic in a certain town at the time to which I am about to refer. A child came home from school, having just recovered from measles. The family consisted of sixteen persons, eight of whom were children. One only took the disease. Another family at the same period contained nine children. One contracted measles at school, and on his return home only two of

the eight suffered, all of them being freely exposed to the poison.

Among the questions which ask for and ought to be answered are—What are the conditions which favour outbreaks of epidemics? Are they atmospheric? and, if so, are they conditions existing at the time of the outbreak, or depending upon pre-existing atmospheric conditions? Or are the conditions that favour the outbreak of an epidemic *states of health of the population*, the consequence of co-existing or preceding atmospheric or *other* conditions? Although some of these questions, it may be thought, refer to subjects outside the scope of clinical research, some certainly are within that scope.

As a good illustration of the influence of pre-existing individual conditions in regard of susceptibility to contagious poisons, I may refer to the well-known fact of the intimate relation between the state of system left after measles and the susceptibility to the poison of whooping-cough. The individual who has just suffered from one of these diseases is, as is well known, prone in a remarkable degree to take the other. That is to say, after the occurrence in an individual of one or other of these diseases, a very small dose of the poison of the other disease is sufficient to produce the development of that other disease. As bearing on this subject, I may refer to Dr. Aitken's paper on the influence of previous residence in Bulgaria on the health of the troops in the Crimea.

One point respecting the etiology of these diseases has recently been brought before the profession and the public in rather strong language; the question, namely, whether these diseases can arise spontaneonsly. A controversy has lately—I was going to say raged—about the mode of origin of typhoid fever; and it well illustrates at the same time our ignorance, the difficulty of ascertaining facts, and the danger of reasoning upon insufficient facts, on an insufficient number of facts, on insufficiently proved facts, and the unwisdom of drawing general conclusions from facts which bear only on one side of a question.

It is said by some that typhoid fever is undoubtedly contagious; it is said that, being contagious, it can never originate *de novo*—that is to say, as it can be proved in some cases to have its origin in the entrance of the emanations from the sick into the previously supposed healthy, it can never arise in any other way. On the other side, while admitting that

the disease may be spread by the emanations from those suffering from the disease, it is said that the admixture of sewage, decomposing animal excreta, with fluids used for drinking purposes, although no typhoid excreta are present, will produce typhoid fever *de novo* in those who drink it; and it is said that the inhalation of sewer gas is itself sufficient to produce, in a previously healthy person, typhoid fever *de novo*.

Before considering briefly some of the arguments that may be adduced in support of any of these statements, I may say that to my mind, from the known facts, the question should be held to be still *sub judice*, and that it is only to be solved by the combined efforts of those who can investigate the origin of typhoid fever when it occurs as an epidemic or in the form of severe local outbreaks, *and* of those practitioners who, being engaged in private practice in country districts, can examine into and report on the single solitary cases occurring under circumstances favourable for excluding fallacies. It is rarely that solitary cases can be satisfactorily investigated in towns, and it is because this important question can only be solved by the consideration of the mode of origin of isolated cases, that I desire to impress upon the members of this Society the importance of reporting every isolated case which can throw light on the question. We have already, and no doubt shall have many more, ably-described epidemics, small local outbreaks, and local outbreaks on a larger scale. We shall have these traced to their origin by men of the highest order of intellect, of the largest possible experience. We have had such reported now in numerous cases, and as the points that still require elucidating in these local outbreaks become better known, these men will be sure to discover the missing links. But no investigation of such local outbreaks can answer completely the question which I say is still *sub judice*, and therefore it is that those who see the solitary cases must report their personal experiences, if we are to have the question definitely and indisputably answered. I know how difficult it is for men engaged in large private practice to hunt out all the facts bearing on the origin of a single case; but when they consider the immense importance it is to the public, and also to the scientific advancement of our profession, I trust that some of them will be willing to sacrifice a little time for the common good.

One general assumption made by those who advocate the sole origin of typhoid fever by contagion requires special

consideration. The general assumption is this, viz. that *no* admittedly contagious disease ever originates in any other way than by contact with the emanations from the sick, and therefore that typhoid fever, spreading by contagion (a mode of its spread which I think is now pretty generally admitted by those who have studied the subject), can be spread in no other way. This general assumption is, as yet, wanting in such proof as conveys conviction to my mind; and I cannot help thinking that it is wanting in such proof as should convey conviction to any unprejudiced mind accustomed to consider questions of this nature. My own prejudices are greatly in favour of the specific origin of this, in common with all contagious diseases. I have long advocated their specific differences, and that each has its specific cause—*i.e.* a cause which is unable to produce any other acute specific disease. If each could in every case be referred to emanations from those previously sick of the same disease, it would tend greatly to strengthen the general views I have long held and advocated. I am prejudiced, therefore, in favour of this opinion. I hope it is true; but then I must say that at this moment the weight of evidence and argument is rather on the other side.

When an admittedly contagious disease is epidemic, it is evident that facts to elucidate the question of its spontaneous origin cannot be collected. There is so much of the special poison in the locality that no one can be sure that he has not in some way exposed himself to its influence. But when the disease is no longer epidemic, when isolated cases occur, then it is that, if a disease never originates *de novo*, we ought—I will not say in every case, but in a majority of cases, if we inquire carefully—to be able to trace back the apparently spontaneous case to its source.

Of small-pox—the most contagious of diseases—I do not hesitate to say, notwithstanding Dr. Budd's assertion to the contrary, that the large majority of solitary cases can be traced, with due care, each to its probable source; and when a case has thus been imported into a locality previously free from the disease, new cases almost invariably spring up in its vicinity. So that the contagious origin is proved, first by tracing the case to its source; and, secondly, by the new cases which spring up from the, at first, isolated case. Small-pox is eminently contagious; and not only so, but, from the vast proportion of instances in which we can trace isolated cases to the source, from the rarity of the cases in

which it is impossible to trace the probable origin to contagion, we may fairly conclude that small-pox never originates *de novo.*

But now let us pass to the other end of the scale of undoubtedly contagious diseases—namely, diphtheria and erysipelas. I mean erysipelas of the head and face—the acute specific disease of which erysipelatous inflammation of the throat and of the face, beginning on the bridge of the nose, is the anatomical character—a disease which is attended with definite symptoms, symptoms before the eruption and symptoms accompanying the eruption, as are the other acute specific diseases. Of the contagious nature of diphtheria and erysipelas I think there can be no more doubt than there is of the contagious nature of small-pox. They are not *as* contagious, but they are both contagious. They are not as contagious, for it is more common for the healthy exposed to the emanations from the sick to escape from these diseases than for them to escape the effects of exposure to small-pox.

Now, while in regard of small-pox it is the exception not to be able to trace the source in contagion, in diphtheria it is comparatively rarely that the first case, even of several, can be traced back to contagion.

In regard of erysipelas of the head and face—also undoubtedly, as I say, contagious—it is the exception to be able to trace the case to contagion. Now it is evident that the more contagious a disease—*i.e.* the less the quantity of the poison needed, the shorter the time of exposure necessary, and the less preparation required in the system of the individual receiving the poison—the less frequently *a priori* should we expect that the disease could be traced back to its primary source. While the diseases of this class which are the least contagious, which require for their spread a longer exposure or more decided dose of the poison or the administration of the poison in a particular way by a special channel, the more frequently should we expect, if every new case were due to exposure to the emanations from the sick of the same disease, to be able to trace them to their original source, the more easily should the parent case be discoverable. But in fact it is not so, for those which are the most contagious are the most commonly traceable to their origin, and those which are the least contagious can the least frequently be proved to have origin in contagion. And we are driven then, it seems to me, toward the opinion that erysipelas frequently, and diphtheria not uncommonly, originate *de novo.*

Typhoid fever, like diphtheria and erysipelas, holds a low

position in regard of its contagious quality. It rarely spreads, excepting when the excreta from the sick are administered by a particular channel. I have never known a case removed from its place of origin give the disease to the inmates of a house into which it was removed, unless there was a communication between the source of drinking fluids and bowel excreta of the patient, and then many suffer. Last autumn ten young men, students at Oxford, went to stay in the same house in Cornwall. After a short residence each returned to his own house, and seven sickened with typhoid fever. These young men evidently contracted the disease at the house in Cornwall. A highly contagious disease, in the ordinary sense of the word, ought to have been the focus from which other cases should have sprung. Had seven young men suffering from small-pox or scarlet fever been distributed into seven houses, I do not hesitate to say that some of the inhabitants of these houses would have suffered from small-pox or scarlet fever. I have never known a case of small-pox admitted by accident into the hospital to which I have the honour of being physician without some one or more persons contracting the disease. When formerly I was physician to the Fever Hospital, I took my clinical class to that hospital for the purpose of showing them fever in its various stages on a large scale. It happened that on one occasion there was a case of small-pox in an outer ward of the hospital—a ward of very large dimensions. While no student took, on any occasion, either typhoid fever or typhus fever, one on that occasion took small-pox; and on another occasion, there being several cases of scarlet fever in the wards, one took scarlet fever. But in the case of these seven young men from Oxford who were distributed into seven houses, not one conveyed the disease to any inmate of the house to which he was removed.

That typhoid fever can spread from one person to another without the swallowing of the excreta, if the person be exposed to the concentrated emanations from the sick frequently, and for a considerable time, there can be little doubt, as I have twice known students contract the disease who were diligently taking the temperatures of patients suffering from typhoid fever, before the registering thermometer was in use, and therefore were obliged on each occasion to put the head many times daily almost into the bed of the patient; and I doubt not most of you could add to the list of these young martyrs to science.

Still typhoid fever has such limited power of propagating itself that the poison must be in large dose, or long breathed, or taken into the stomach, to produce the disease; and, therefore, I say that the disease ought in the majority of cases, especially in country places and isolated houses, to be able to be traced to its source, if that source be in every case the excreta or emanations from sufferers from the disease. But, in fact, its origin has not hitherto been able to be traced to pre-existing cases in a large number of instances. But not only do numerous cases occur in which typhoid fever is not traceable to exposure to emanations or excreta from the sick with typhoid fever—*i.e.* to contagion—but there are a sufficient number of cases on record to render it probable—*probable* only, I say—that the admixture of sewage not typhoid with drinking-water may produce typhoid fever *de novo*. And most of us must have met with cases in which the breathing of greatly diluted sewer-gas continuously for some time, and especially at night, has seemed to have been able to produce typhoid fever *de novo*. But new cases, sceptically scrutinised and carefully recorded, are required to settle this question. It is only in exceptional instances that cases free from all possible—at least, all probable—sources of error come under notice, and such cases can only be seen in private practice, especially country practice; and it is for this reason that I especially dwell on this subject to-night, my desire being to urge the careful observation and reporting of these isolated cases.

The following case serves to illustrate the difficulties which beset inquiries such as this:—

A young lady was under my care with typhoid fever. She had been for some months an invalid, and was so placed that all probable sources of communication of the disease from the outside could be excluded. She resided in a completely detached villa; she was confined to her own room; there were few inmates of the house, and these were entirely devoted to her service. She had lived in the house for about two years, and during that time no one had suffered from typhoid fever. On the floor on which she slept was a water-closet, well ventilated, and used only by two or three persons in perfect health.

Now this young lady was the only person who never left the floor—that is to say, was, day and night, breathing the air on this floor of the house. A sewer-gas odour was detected, and on taking up the flooring it was found that there

was a crack in the soil-pipe of the water-closet, just below the seat—that is, in such a position that the gas escaping from the soil-pipe at this part would find its way between the joists, under the boards of the floor, and thus pass to the rooms on this floor.

It is true this young lady had received a few visitors in her bedroom, and it is possible, it may be said, that some of these were the subject of typhoid fever. But the persons who visited her were all well known, and there are no grounds for thinking that any one of them suffered before or after from typhoid fever. Again, the drain of the house opened into the town drain, on the outskirts of which the villa is situate; but then the drains were trapped, and the traps new and efficient.

It is only by the multiplication of solitary cases that proof on one side or the other can be obtained. With reference to those contagious diseases which are unable to be traced in so many cases to a pre-existing case of the same disease—viz. typhoid fever, diphtheria, and erysipelas—there are three points worthy of remark.

1st. That they are more liable than the most contagious —*e.g.* small-pox, measles, scarlet fever—to recur in the same individual.

2nd. That when not referable to contagion, each is pretty constantly referred to a particular and the same cause—*e.g.* diphtheria to exposure to cold; erysipelas to exposure to cold when the exposed person is depressed from fatigue, mental or moral causes, &c.; typhoid fever to foul gaseous emanations or impure water.

3rd. That certain primary constitutions seem more prone than others to suffer from these less contagious diseases. We must all be acquainted with families that exhibit these proclivities.

I have known diphtheria, for example, occur in four members of a family at long intervals of time, and at localities widely separated. One suffered in London, one at Brighton, one at Scarborough, and one at some other place in the country, and these several cases occurred at altogether different times. Now when we consider the infrequency, comparatively speaking, of diphtheria, such a fact as this shows on the part of the members of this family great primary constitutional proclivity to this disease.

I have known six out of seven males of a family suffer from typhoid fever, no two of the cases occurring with less

than two years' interval, and no two at localities within less than fifty miles of each other; while in the same family one only of the same number of females suffered from typhoid fever. Here, again, there must have been a great proclivity to typhoid fever on the part of the males of that family.

I do not say, nor do I think, that the arguments and facts able to be adduced in favour of the origin *de novo* of the contagious diseases are conclusive; but I do say they are strong enough to make us pause before we accept the theory advocated by Dr. Wm. Budd, and to which Prof. Tyndall has lent the weight of his great name—a weight which would, however, be greater on the point in question if he had himself studied the subject on which he has, I am sorry to say, addressed the public in a strain calculated to check unprejudiced individual inquiry.

What I have said on the etiology of the acute specific diseases shows how much has yet to be proved, how hard is the work to be performed, ere the opinions entertained on the subject can be converted into knowledge.

I will not dwell longer on the etiology of the acute specific diseases; but I must allude briefly to that condition of the individual which precedes the establishment in so many cases of chronic organic diseases. We are apt to pay too little attention, to attribute too little importance, to that general, to use a barbarous expression, 'out-of-healthedness' which is so common in the previously healthy from overwork, from anxiety, from overfeeding, from overstimulation short of so-called intemperance, from want of food, or from deficiency of stimulants—that out-of-healthedness in which the patient often refuses to admit that he is ill although a little out of sorts, and only seeks advice because his friends notice that he does not look well and urge him to consult some medical friend. This condition cannot be studied in hospital. Those only who are engaged in family practice can trace the origin, can watch the course, can estimate the effects of this condition in all its bearings. For myself I have been long satisfied that a very large proportion of the subjects of organic diseases —tubercular, malignant, and degenerative, using those words in their widest sense—are mistaken when they attribute the symptoms of imperfect health from which they have long suffered to undetected incipient local disease, and for not detecting which they too often blame their first medical attendant. The deteriorated general nutrition, to which I have referred as mere out-of-healthedness, was the cause of

their sense of want of perfect health; and ultimately this imperfect general nutrition of every part of the body culminated in the extreme malnutrition of that part or organs which natural constitution or accidental circumstances had rendered less able to resist organic changes.

As to the symptoms which mark the very outset of a disease—in illustration of my position that there is not a disease respecting the symptoms of the outset of which we are not wanting recorded facts—I may refer again to that much studied disease, typhoid fever. In Wunderlich's excellent work occurs the following statement: "We may exclude typhoid fever when, between the fourth and sixth day, in a child or adult under middle age, the temperature never reaches 103·1°, and, indeed, if it fails to do so two or three times." It is impossible not to see that this conclusion is based, as are other of his statements, on cases admitted into hospital; and everyone who has enjoyed large experience in private practice would, I think, be disposed to temper this law with so many exceptions that, as a law, it could hardly be said to exist. And yet in proof of the existence of these numerous exceptions recorded facts are wanting.

With reference to our lack of recorded facts as to the course of common diseases, I shall only mention one disease, concerning which I thought two facts quite certain; but on talking to others I heard doubts expressed as to the truth of these facts, and I soon found that the observations on record were not detailed with sufficient precision to justify me in drawing the conclusion which, if the supposed facts be real facts, flows from them.

Does emaciation make rapid or steady advance when an external organ, unneeded for life or health (as the breast), is the seat of scirrhous cancer, when the appetite is good, and there is neither ulceration nor discharge? If it be that this steady loss of flesh occurs when the breast is the subject of scirrhous cancer, does it take place without any elevation of temperature? Had there been recorded facts to answer these two questions in the affirmative, then it seems to me that this important conclusion would follow. In the process of nutrition there are three factors—viz. the cells of the body generally, the nerves that regulate their functions, and the material out of which new tissue has to be formed. It is clear that atrophy of the body generally, like atrophy of a part, may be due either to excessive waste or to deficient supply of new material; but if there be no elevation of temperature there can

be no rapid waste of the whole body. And as we know that in cancer there is no disturbance of the nerve function of the body generally, and as the cells of the body generally are healthy in structure, then we should have to hold the emaciation to be due to the third factor in nutrition, the blood.

I mention all this, not as affording any clue to the pathology of cancer, but as illustrating the want of facts—of accurately observed and of carefully recorded facts—in relation to the course of one of the commonest of diseases.

Time will not permit me even briefly to illustrate our lack of knowledge in regard of the other headings to which I have referred; but, before concluding, I must direct your attention to two or three points bearing on our knowledge of the treatment of disease. It does seem to me to be discreditable to us as a profession that such common diseases as rheumatism and whooping-cough—each, so far as we know, uniform in its pathology—should have for their cure so many drugs. For the good service able to be rendered by each of these drugs men of high position, of great powers of observation, of unquestionable honesty of purpose, have vouched in the most emphatic manner; and yet no one of these drugs is found by the profession, speaking generally, to yield unequivocally favourable results. The precisely recorded observations of one of the distinguished men who have filled this chair, and his colleague, Dr. Sutton, have thrown so much doubt on the value of some of the remedies which have enjoyed the best reputation for the cure of rheumatism, that a re-examination of all these so-called curative remedies is imperatively called for. The difficulties in the way of advances in true therapeutic knowledge are very great; but are the difficulties insuperable which stop the way to our ascertaining the real value of the cures for acute rheumatism or for whooping-cough? Could not an unprejudiced examination of the effects of all the remedies hitherto propounded by men of repute, and purporting to have tangible evidence in their favour for acute rheumatism and for whooping-cough, be undertaken on a large and decisive scale?

There are two kinds of evidence to be adduced in favour of the influence of any drug on the course and termination of a disease. One is the evidence afforded by individual cases observed separately, all the special points of which cases can be weighed at the bedside by the practitioner: weighed, it is true, rapidly, and perhaps, some points, roughly, but still weighed—for example, the age, the sex, the habits, the con-

stitution, the presence or absence of complications, of concurrent or pre-existing ailments, of the surroundings.

Every remedy must be, as a final court of appeal, put through this trial; and, if time be given to dispel the illusions of fashion, and to allow the weight of great names to be reduced to their true standard, it is pretty certain that the verdict is correct.

In testing remedies, we must ever bear in mind that all acute diseases run a more or less definite course, and that the tendency of all internal acute disease occurring in the previously sound, and not of traumatic origin, is, if left to itself, to terminate in health.

What may be called incomplete diagnosis has often led individuals to erroneous generalisation in reference to treatment, identity of symptoms having been confounded with identity of pathological conditions. The late Sir Benjamin Brodie had great confidence in the bichloride of mercury in the treatment of paraplegia, and he, and others following his example, prescribed it indiscriminately in all cases of that disease. He saw it cure syphilitic paraplegia, and, not knowing that the particular case he was treating was syphilitic in its nature, regarded bichloride of mercury as the remedy for every case of loss of power in the lower extremities. And then other members of the profession tried the effects of bichloride of mercury in paraplegia; and if it happened that they gave it in two or three cases of syphilitic paraplegia, they, too, expressed the greatest confidence in bichloride of mercury as a cure for paraplegia. But others, happening to give it in succession in two or three cases not syphilitic in nature, declared it to be useless, or worse than useless, as a cure for paraplegia.

One mode, then, of estimating the value of therapeutic agents may be called the individual, and in thus testing the value of particular modes of treatment, every member of this Society may assist. The other method of estimating the value of therapeutic agents may be called the analytical—that is to say, we test the worth of the drugs by the analysis of a large number of carefully observed and recorded cases. For cases thus collected to be compared they must be numerous enough to afford a sufficient number more or less identical in regard to age, &c. Researches of this kind can only be conducted in hospitals, and I think for the purpose of collecting such cases in sufficient number, for the purpose of directing attention to special comparable facts, committees

might be formed from members of this Society; and were this done with due care, every member of the Society might aid in obtaining valuable, because real, therapeutic knowledge. And the testing clinically the value of the several remedies proposed by great authorities for the cure of acute rheumatism and for whooping-cough seems to me to be an object worthy of such a committee, and the questions involved seem to me to be those that such a committee might in time definitely answer.

Excuse me yet a little while to speak of the treatment of a special class of diseases. When any acute specific disease is epidemic, the public—the educated public—call loudly for a cure, and too often, I think, members of our profession call out as loudly 'Eureka!' Now to me it seems that there are no grounds for expecting that a cure will ever be found for diseases of this class—*i.e.* for expecting that a drug or medicinal agent will be discovered capable of arresting the progress of the organic changes which, set in motion by a special cause, and following each other in definite and ascertained order, constitute what we call an acute specific disease.

For in place of being diseased actions, these several organic changes, the evidences of which we call symptoms are, so far as our present knowledge extends, processes, the first of which being called into action by some external cause—*e.g.* the poison of the disease—are essential for the restoration of the intimate organic changes to the order and intensity which constitute health.

I may illustrate my meaning thus:—Each of these diseases may be likened to a single fit of ague. We administer drugs to prevent the recurrence of the fit, but we do not cure the fit itself; the cold stage having commenced, and attained a certain intensity, the hot and sweating stages are essential for the restoration of the balance of health. So with small-pox. By vaccination we prevent its occurrence; but when the first of the phenomena—which, following each other in certain and definite order, constitute an attack of small-pox—occurs, we know that there is no road to health but by the sequence of changes the symptoms of which mark the several stages of the disease; and to my mind it is very questionable whether, if it were possible by the administration of a drug to arrest the essential changes which constitute any one of these stages, health would be the result. And what is true of small-pox in this particular seems to me

to be equally true of all the acute specific diseases; and when I read the lists of cures of cholera which swarm into the columns of the press at the first inroad of an epidemic of that disease, I should smile did I not know that a column of cures for cholera in a leading newspaper may be the death-warrant of numbers.

Although the science of medicine can never hope for a cure for any one of these diseases, it can prevent death from all; and it is time that the public, and not the profession only, had correctly appreciated what medicine can and what it cannot be expected to do in this class of diseases. Nor would medicine as a practical science fall in public estimation, or physcians be less highly esteemed, were the public instructed in this matter.

At one time the chemist was valued especially because it was supposed that by his aid the baser metals, as they were foolishly called, could be transmuted into gold; and day and night he sought for that 'powder of projection' by which the transmutation should be at once effected. Faith in this transmutation—faith in the discovery of this powder of projection—is exploded; but is the chemist less highly valued—his aid less earnestly sought? No. The work he can do is of more worth than the work it was fancied he could do.

So the physcian: he cannot transmute by a special drug the sequence of processes which we call, say, an attack of cholera, into the sequence of processes which we call health, any more than the chemist can transmute iron into gold. The certain cure for cholera and the powder of projection of the alchemist are alike apocryphal—the dream of a prescientific age, or the base attempts of charlatans and quacks to prey on those whose minds are yet in the prescientific stage of development—that is, the ignorant and the credulous. The public must learn that the true, the real, in regard of the relations of medicine to these diseases, is as different and as superior to the fancied as is chemistry to alchemy, or natural science to the black arts. Medicine teaches us how to prevent, in many of the acute specific diseases, the first of those processes the sum and sequence of which constitute the disease; and, when the first of that sequence has commenced, the physician, though he must reprobate the folly of those who cry out for a drug which shall stay the sequence of processes which are in reality the steps to health, does not stand helplessly by and leave the patient to his fate, but,

by the judicious application of the rules of art, so moderates the necessary disturbances of function, that they shall eventuate, when the last of the series of restorative processes is over, in health in place of death. The physician in such cases may be likened to the physicist who, although he cannot prevent the discharge of the electric-laden cloud, can yet save the threatened tower by conducting the lightning's flash harmlessly to the earth.

COMMUNICATIONS.

I.—*Case of Traumatic Stricture of the Trachea, relieved by Operation.* By HENRY LEE. *Read October* 9, 1874.

THE patient was exhibited to the members of the Society. The case had already been brought before the notice of the members and was published in the last volume of the Transactions.* He was introduced in order to show the result of the operation.

The patient had, in the month of February 1873, cut his throat with a carving-knife, making a transverse wound immediately below the cricoid cartilage.

He had twice narrowly escaped suffocation, and had been relieved on each occasion by tracheotomy. After the second attack he continued to wear a tracheotomy tube, but there was a great disposition of the parts to contract; and when he withdrew the tube for the purpose of cleansing it, there was often great difficulty in replacing it. He entirely lost his voice, and could only make noises with his lips.

A third operation was undertaken for his relief, and consisted in removing the upper ring of the trachea which had been the cause of the stricture, and which was performed after the patient had lost his voice for six months.

When exhibited to the members of the Society the second ring of the trachea could be seen encroaching somewhat on its cavity, and illustrated the way in which the stricture had been produced. His speech was entirely restored.

II.—*Bloodless Surgery.* By F. ESMARCH, M.D. *Read October* 9, 1874. *Communicated by* WM. MACCORMAC.

DURING my present visit to England and Scotland, I have often found occasion to speak with other surgeons on bloodless surgery. I found that some were but imperfectly acquainted with the method; that others applied it, but not

* Vol. vii. p. 112.

in the right manner; that others, again, attached no importance to the avoidance of hæmorrhage during an operation.

This experience induces me to address a few words on the subject to this Society, because I hope to find many present who have acquired similar views to my own on the value of the method, and because I am convinced that it is scarcely possible to speak too often or loud enough on the influence which this method must exercise on what we call good fortune in surgery. Without doubt the best proof of the value of any method is afforded by its influence on the mortality after the greater operations, and especially after amputations of the limbs.

I lately compared the results obtained in my practice after operations performed bloodlessly, with the recently published results of operations performed by other surgeons; and I found that my results were much better than the best of these, including even such in which the antiseptic method had been strictly followed. But you may very properly object to this; that it is not conclusive to compare the statistics of other hospitals or surgeons with my own, because the circumstances in different hospitals and the cases as well as the treatment are so different, that they do not admit of comparison without a detailed account of the individual cases.

Much more important, undoubtedly, must be the comparison between cases occurring in my own practice and performed in the same hospital previous to the application of the bloodless method and afterwards. This comparison I am able to offer.

I have put together the statistics of the operations I performed during the last six years, and have found the most striking results. I shall only mention to you, as an example, the statistics of the amputations of the thigh and leg.

Of 88 amputations of the thigh performed in the first five years there died 37, or 42 per cent. Of 67 amputations of the leg there died 19, or 28 per cent. After the adoption of the bloodless method, there died: of 13 amputations of the thigh, only 1, and of 12 amputations of the leg only 1, so that the proportion of fatal cases in amputations of the thigh and leg together is brought down from 36 to 8 per cent.

Even admitting the error which may result from the difference of the numbers compared, I am of opinion that these statistics afford such striking evidence of the value of bloodless surgery, that no one should neglect this method in cases

to which it is at all applicable. Nor should its use be limited to operations on the extremities, but should be extended to other regions with such special modifications as each case may require. For instance, I at one time believed it to be impossible to use it in *amputations at*, and in *excisions of*, the shoulder joint; but a few trials showed nothing to be easier. For these operations it suffices to pass the elastic tubing under the arm-pit, and to have it tightly held over the shoulder by the hand of an assistant, replacing the latter by a clamp in more protracted operations.

In some cases, however, compression by aid of the elastic tubing does not suffice to prevent the afflux of arterial blood, and in these other means for the prevention of hæmorrhage must be resorted to. Allow me to detail a case of this description. In the course of last summer, a man between 50 and 60 years of age, with a tumour of the size of an ostrich's egg filling his right arm-pit, was admitted into my hospital. The tumour had attained this size in the course of two years, and as it caused great pain, and quite incapacitated the patient from work, its removal at all hazards was wished for. The tumour was firmly wedged in between the chest and shoulder-blade—to the anterior surface of which it seemed to adhere—all movements of the scapula being communicated to the growth, which was unaffected by rotation of the head of the humerus. The presence of severe pain in the arm led to the supposition that adhesions existed between the growth and the nerves in the arm-pit.

Microscopic examination of a piece of the tumour removed by means of an exploring trocar showed it to be a myxosarcoma.

Growths of this nature are known frequently to take their origin in nerve-sheaths; and as risk of rapid relapse in such cases can only be obviated by the operation for their removal including the surrounding tissues, even if these be apparently healthy, I considered that indications existed for removal of the whole arm with the scapula. The elastic tubing could not be applied in this case, nor could other means of compression be resorted to, as the pulsation of the subclavian artery was not to be felt—the tumour having pressed the shoulder upwards and thereby considerably deepened the supra-clavicular fossa.

I therefore determined to tie the subclavian artery.

I commenced by bandaging the arm up to the shoulder with elastic webbing, and then removed the outer two-thirds

of the clavicle, for the purpose of exposing the artery—a course rendered necessary by the altered relation of the parts.

Both the subclavian artery and vein were then ligatured and divided. The cords of the brachial plexus, which were tensely stretched, and which partly entered into the substance of the tumour, were then cut through.

I then made anterior and posterior skin-flaps, and quickly removed the scapula and arm, with hardly any loss of blood, only a few vessels in the divided muscles requiring ligature. The wound was united by sutures, and dressed with carbolised oil. The reaction was moderate, and healing was nearly completed at the time of my leaving Kiel.

The applicability of the bloodless method is, however, not limited to the extremities.

Tumours situated in other parts of the body, provided they be superficial, can also be removed without hæmorrhage. For instance, in operating upon erectile tumours of the scalp in children, all bleeding can be prevented by compressing the surrounding parts by means of steel rings mounted on handles.

In operations on the trunk, the same object can be attained by a thick ring of india rubber, secured by elastic tubing.

Operations on the male genitals can also be performed bloodlessly by the employment of a slender piece of elastic tubing, made to encircle the root of the penis and scrotum. It was thus possible for me, for instance, to perform the following operation, the execution of which I should not have attempted under former circumstances.

Last winter an old man presented himself for admission, suffering from epithelial cancer of the penis of several years' standing.

The anterior surface of the scrotum and the penis, within an inch of its root, presented a mass of cauliflower excrescences, about the size of the palm of the hand, the seat of offensive discharge, and the occasional source of copious hæmorrhage. There was a narrow fissure in the centre of the growth, through which water was passed with difficulty. The inguinal glands on both sides were enlarged and adherent. The patient was so weak and anæmic that I could not have ventured on operative interference in his case without the bloodless method. With its aid, however, I was enabled fearlessly to undertake an operation, the immediate

effects of which were most satisfactory. I began by passing a piece of elastic tubing of the thickness of a little finger round the root of the penis and scrotum; I then crossed it over the symphysis pubis, then passed it backwards, crossed it again over the os sacrum, and finally secured the ends over the abdomen.

I then removed the whole growth, including the penis and anterior wall of the scrotum, without losing more blood than was contained in the parts prior to constriction, the vessels being easily recognised and carefully secured after division. I then removed with all possible speed the enlarged glands, together with the integument from both inguinal regions, separated the crura penis, which were found to be indurated, from their attachment to the pubis, dissecting them carefully from the posterior and healthy part of the cavernous body of the urethra, and then divided the posterior surface of the scrotum by a median incision, at the posterior angle of which I fixed the remaining part of the urethra by sutures, and finally covered the wounded surface anteriorly, and in both inguinal regions, with the scrotal flaps. The old man had lost but little blood, and was very well after the operation. The large wound healed without any unfavourable symptoms, and he was about to be discharged to his home, when suddenly fever and symptoms of pleuritic effusion supervened. The patient died in a few weeks of exhaustion. The autopsy showed extensive cancerous deposits in lungs and pleuræ, with effusion into both pleural cavities.

Gentlemen, I am afraid I have trespassed too much on your time and patience by detailing these cases. I will therefore only add, in conclusion, that in the 300 cases in which I have used the bloodless method, I have met with no evil consequences which could be attributed to it. It may perhaps be of some interest to state that the longest operation which I performed by this method lasted two hours and a quarter.

It was a necrosis of both tibiæ, with suppuration of the knee-joint on one side, in which I first removed many pieces of dead bone from one tibia, and then performed resection of the knee-joint; my assistant being at the same time engaged in operating for necrosis on the other limb. This is a different case to that already reported in one of my papers on the subject.

III.—*Case of a Foreign Body impacted in the External Auditory Meatus.* By W. B. Dalby. *Read October* 9, 1874.

In April of this year one of our well-known sculptors was engaged to execute a marble bust of the gentleman who is the subject of this case.

As the cast of the head was being taken, some of the plaster of Paris, in a semi-fluid state, found its way into the external meatus of the right ear, and, falling into contact with the tympanic membrane, became rapidly hardened into a mass, which took a cast of the external auditory meatus for part of its extent in this situation. I saw the patient on April 28, in consultation with Mr. Booth, of Manchester. The tympanic membrane was entirely covered with the concrete, which was in close approximation to the sides of the meatus for an extent of about half an inch, measured from the furthermost boundary of this passage. The deafness was complete, and there was constant tinnitus. No forceps or other instruments could be applied to grasp the mass, as there was no rugged edge to seize; and, besides this, it was firmly moulded to the sides of the passage. As it became necessary to soften the plaster before anything could be done, the questions arose—What were the best solvents of plaster of Paris? Which of these were least harmful to the surrounding tissues? And how could they be least harmfully applied? The stony hardness and insoluble character of set plaster of Paris is familiar to everyone. It consists, as we know, in chief part of sulphate of lime, with a small proportion of silicate of lime. The only acids which act at all upon it are sulphuric and hydrochloric. The following was the plan of proceeding I adopted:—While light was thrown through the speculum from a reflector worn on the forehead, I applied, drop by drop, to the centre of the mass, strong hydrochloric acid on the end of a pointed piece of wood, care, of course, being taken not to allow any of the acid to touch the meatus. Several drops of the acid were in this way used at each sitting. This was repeated four days in succession. On the fifth day the mass was so far softened that I was enabled to drill a small hole in the centre by slowly rotating a cataract needle. More acid was now applied, and by the

help of a little hook used by dentists in taking out the stopping of teeth, I could pick away small portions of the now partially softened plaster. In this manner, without giving any pain whatever, I got away enough to gain a view of part of the membrane, and found that the hearing was, although imperfect, not very seriously impaired. During the days which had been occupied in the way I have described, experiments were being made for me by Mr. Brownen, a practical chemist, upon pieces of set plaster of Paris, and he now brought me some which had been subjected for ten hours to the action of a saturated watery solution of acetate of lead. The effect of this salt had been to reduce a small piece of the hardened plaster which had been soaked in it to the consistence of mud, and this, after exposure to the air for a short time, had taken a crystalline form, and again hardened. The acetate had acted upon the set plaster by decomposing it, acetate of lime and sulphate of lead being the result of the decomposition. The acetate of lime being a very deliquescent salt, by attracting the water had caused softening of the plaster. The meatus was now filled with this solution, and what remained of the plaster was, in this way, softened so far that I was able to extract it piece-meal, and the tympanic membrane being in its whole extent exposed to view, the hearing was found to be perfect, and the tinnitus was quite gone. Throughout the proceedings, which occupied eight sittings, reflected daylight was the light employed.

I have been induced to bring this case before the Society, as the accident which led to the injury is one which, so far as I know, is quite unusual, while, at the same time, it is one which, from the manner of its occurrence, might readily happen again, and so come under the observation of surgeons.

IV.—*Case of Caries of the Atlas and Axis.* By Warrington Haward. *Read October* 9, 1874.

JAMES P., æt. 8, was admitted under my care into the Hospital for Sick Children, November 8, 1873. His family history was good. The parents were healthy, and had five other children, who were in good health. There was no phthisis or scrofula amongst them. This boy had been quite well until he had measles at the age of five years; after that was not quite so strong, but never had any special ailment.

There is no evidence of his having received any injury. About nine months before his admission he was noticed to have his head awry, the face looking towards the left: he complained occasionally of pain in the head, which was worse at night. The pain however diminished, and the deformity increased. He appeared to have nothing else the matter with him, and was brought to the hospital for treatment of the wry neck.

When I saw him he was a rather pale but not unhealthy-looking boy. The head was held fixed, with the occiput drawn towards the right shoulder, the face fronting to the left. The right sterno-mastoid muscle was contracted, and the head was with difficulty brought into the straight position. He had no pain about the neck, and passive movements of the head and neck could be made in all directions without hurting him; but if he tried to straighten the head himself, he complained of pain about the occipital protuberance. Pressure upon the head or spine gave him no pain. There was no projection nor thickening over any part of the spine. There were no enlarged glands about the neck, and nothing unnatural could be felt behind the pharynx. Walking and running about gave him no pain, neither did raising himself from the recumbent posture. There were no signs of scrofula about him. The left sterno-mastoid muscle was apparently slightly wasted. As I thought the wry neck might depend rather upon loss of power in the left sterno-mastoid than upon spasm of the right, I asked Dr. Tibbets to examine the behaviour of the muscles under galvanism, and he found a decided want of action in the left sterno-mastoid, the right being of normal irritability. Under the influence of chloroform the head could be straightened without the slightest difficulty.

Nov. 12.—I moved the head to the straight position, and placed it in a padded wooden frame, contrived for the purpurpose, and in which it was kept fixed. The left sterno-mastoid was faradized, by Dr. Tibbets every alternate day, and he was given cod-liver oil and steel wine.

26.—The contractility of the left muscle had improved, and he could turn the head to the right when released from the apparatus. The frame was kept applied, however, and the treatment continued till

Jan. 19, 1874, when the frame was removed, and he was allowed to get up. The head was now held quite straight, and he could turn it to either side without pain.

I again repeatedly examined the spine, and could detect no disease: even sudden jarring of the head gave him no pain. After a few days, however, he was observed to raise the right shoulder, and the head gradually resumed the twist towards the left.

Jan. 28.—The head was as much awry as before, and the treatment was resumed, and continued till March 12, when he was transferred to the Highgate branch of the hospital, and after a short time was allowed to get up. The head was now held straight, but stiffly, and after the manner of one with cervical spine disease. Nevertheless, with the exception of this stiffness, I could discover no sign of disease of the bones, and all the movements of the head and neck could be made without pain. The boy however lost flesh, and thinking that he might be suffering from his detention in hospital, I sent him home May 24.

Soon after this his mother noticed that he dragged his right leg slightly in walking, and he seemed languid and preferred to lie down.

June 10.—I saw him, and found then that he had rapidly emaciated. There was decided loss of power both in right arm and leg, there was no wry neck, and he held his head less stiffly.

He became gradually weaker and more emaciated, and June 15 was re-admitted into the hospital.

The notes of Dr. Barlow, the registrar to the hospital, thus describe him:—'Boy looks thin, pale, and languid; he is, in fact, extremely emaciated. He lies on his back, or on the right side. Does not care to move, but says he is in no pain. Has slight internal right strabismus, but can move the eyeball to the right. Pupils equal; rather large; sensitive to light. No anæsthesia of face. Masseters act well. Left cheek bulges when the boy blows. When he smiles or cries, or shows upper teeth, the right naso-oral ridge comes into stronger relief than the left. He frowns symmetrically, and closes both eyelids equally. There is no deafness. He protrudes his tongue distinctly towards the left side, although only to a slight degree. The uvula points towards the right; the left palatal arch is persistently lower than the right.

'His articulation is a little slow, but otherwise natural. Has no difficulty in swallowing.

'Pulse regular.

'He is either unwilling or unable to raise his shoulders

when told to do so. He appears to be able to move his head without distress in any direction, although this was not tested efficiently on account of the boy's weak condition and languor. There is, at all events, no spasm."

I now again examined his cervical spine, and could only make out that the muscles at the back of the neck were wasted, so that all the prominences were felt more distinctly than usual. There was still no pain or tenderness, but the boy was so ill that it was impossible to examine this very thoroughly. He did not move the right arm so well as the left, but it was difficult to determine any paralysis of either limb.

He now became sick and drowsy, and also had retention of urine, requiring the use of the catheter. The bowels became confined, the abdomen retracted, the pulse irregular, and slight muscular twitchings occurred; in fact, he exhibited the usual symptoms of tubercular meningitis; and with these he died on June 23.

The post-mortem examination was made by Dr. Barlow, eighteen hours after death.

The brain and its membranes exhibited the usual signs of tubercular meningitis: central softening, effusion into the ventricles, and a large quantity of tubercle and lymph in the pia mater at the base.

It was thought, on examining the throat and back of the neck, that the atlas could be felt more distinctly than usual both in front and behind, as though it had undergone a slight rotation on a horizontal axis taken through the two transverse processes.

This was found to be the case, owing to the carious condition of the front part of the body of the axis.

The foramen magnum, viewed from above, shows the following appearances:—To the left of the centre is a long thin prominence, evidently the odontoid process, displaced upwards; and to the right is the spinal cord, slightly flattened, but not otherwise altered; though it is evident that the origin of the left spinal accessory must here have been pressed upon. There was tubercle in the pia mater of the upper part of the spinal cord. The cord, with the exception of being slightly flattened at the upper part, appeared natural.

There was a small quantity of lymph on the back of the pharynx, and between it and the spine a small quantity of red creamy fluid.

The anterior margin of the foramen magnum was carious.

The two superior articulating processes of the axis were

greatly worn away by caries, the left being almost entirely destroyed: the odontoid process was also reduced by caries to about half its natural size. The lateral masses of the atlas were extensively destroyed by caries, and the tubercles for the attachment of the transverse ligament quite gone, so that the ring of this vertebra rested upon the transverse processes of the axis. In consequence of the greater destruction of the left superior articulating process of the axis than of the right, the ring of the atlas was displaced slightly towards the right. The pointed remains of the odontoid process projected through the foramen magnum. There was however very little, if any, displacement forwards of the atlas.

The posterior ligaments were intact, but the transverse and cheek ligaments were completely destroyed.

The thoracic and abdominal viscera were healthy. No caseous material was found anywhere.

This case is of interest, as showing how large an amount of disease of the atlas and axis may exist without giving rise to any of the ordinary or characteristic symptoms of disease of the cervical spine. The possibility of the existence of such disease was not overlooked, but on the contrary was constantly before my mind, and led to repeated and most careful investigations with a view to its discovery, but these failed entirely to elicit any sign of its presence. There was no pain on rotating, or nodding, or pressing the head, no difficulty in raising it, none of the characteristic fear of moving the head; no thickening over the bones, no tenderness or swelling behind the pharynx. In fact, until the end of the boy's final illness, nothing but a wry neck. But nevertheless destruction of the atlo-axoid joints was gradually going on, and, had the boy not died of tubercular meningitis, would probably have ended in his sudden death. I need hardly say that had I been aware of this I should not have allowed him to move his head, nor to leave the recumbent posture. I may here mention, that I found placing the head in a box, padded to fit it and secured to the bed, an efficient way of keeping it fixed, not always an easy matter in children. The twist of the head may, I suppose, have been partly due to the unequal destruction of the two sides of the axis, and partly perhaps to pressure on the origin of the spinal accessory nerve.

The absence of pain on movement must be very rare, although the case of Dean Buckland * furnishes a well-known

* Pathological Trans. vol. xv. p. 20.

instance of a condition of the atlas and axis almost exactly similar to that I have described, having existed without having been suspected during life; but there it was combined with other exceptional circumstances. In connection with the case I have related I would state that I have lately had under my care a boy in whom disease of the cervical spine was closely simulated by periostitis of the inferior surface of the occipital bone. He had periostitis of several other bones; and, a thin layer of the occipital bone having separated, he perfectly recovered.

V.—*A case of Vertigo simulating Brain Disease, and produced by Strain of the Convergence Muscles of the Eyes.*

By Robert Brudenell Carter. *Read October* 22, 1874.

In the early part of 1873 I was consulted about the case of a young gentleman, whose father accompanied him, and related a history to the following effect:—

The father was a banker in a provincial town, and the son, who was an only child, had been intended to succeed to his father's business and social position. About eighteen months before I saw him he was at Oxford, reading hard for honours, and with confident expectation of obtaining them. His work was suddenly interrupted by symptoms which compelled him to obtain medical advice, and which were attributed to some serious and alarming cerebral disturbance. He was directed to abandon his studies immediately, and not only to give up the idea of taking honours, but even to leave the University immediately, without aspiring to an ordinary degree. He returned home, and there the opinion given at Oxford was reiterated by his family attendant, and was confirmed by a consulting practitioner in the locality. He was for some time under treatment, but derived no benefit, and at last came to London for further advice. An eminent physician, since deceased, concurred in the view that had already been taken of the case, and pronounced absolute rest of brain to be essential to the patient's recovery. In order to obtain this rest, he was directed to undertake a voyage to Australia and back, and this direction he literally fulfilled. He went to Australia, made some brief stay there, and returned to England unimproved. He was then told that little or nothing

more could be done for him; that he must abandon the idea of carrying on the family business, or of taking any active part in life; and that he must also abandon an engagement of marriage which he had formed prior to his illness. His prospects seemed entirely blighted, and he listened to his father's narrative with a careworn and dejected expression which was pitiable to see. The father concluded by saying that he had heard from a non-professional source that oculists were in the habit of using some instrument by which they could see the state of the circulation in the brain, and that he had come to me in the forlorn hope that an examination by this instrument might throw some light upon the case.

On inquiring into the actual condition, I was told that it was "very peculiar." The memory, the intelligence, the mental faculties generally, were all unimpaired, and at last I narrowed the case down to this, that the patient was unable to read. Before he had read a page he became the subject of double vision, followed by vertigo; and also if the effort was continued, by sickness, palpitation of the heart, and intense headache. These were the symptoms which had interrupted his work at the University, and they had ever since recurred almost as soon as he opened a book. When he had not been trying to read he was in all respects quite well.

On examining the eyes, I found that they were both myopic in the same degree, and that the far point was only eight inches distant from the corneæ. The patient had binocular vision, and had never worn spectacles. With concave lenses of eight inches focal length the distant vision was nearly normal. Beyond myopic crescents, the ophthalmoscope showed nothing amiss.

With these data, the conditions of the case began to be manifest. The patient had never been able to read from a book which was more than eight inches from his eyes, and had generally held it still nearer, say at seven inches. The internal recti muscles, therefore, were required to maintain convergence of the two optic axes to a point only seven inches distant. Up to a certain period they fulfilled this requirement, but they broke down under the stress of work which was imposed upon them by reading for honours. The muscles became tired, they relaxed suddenly, and as a matter of course, the two eyes being no longer directed to the same point of the page, the lines and characters would appear doubled. It is probable that the whole system was somewhat overwrought; but the transitions from double vision to vertigo, from vertigo

to faintness, sickness, and palpitation, and from palpitation to headache, are easily intelligible. The muscles, having once struck work, rebelled against even a short period of convergence; and the grave view taken of the symptoms by medical authority added anxiety and emotional excitement to the pre-existing elements of the case. After a period of rest, the patient could not take up a book without watching for a recurrence of the old troubles; and this expectant attention enabled the muscular sense to recall the former series of phenomena, very much as an hysterical paroxysm may be reproduced by dwelling upon the sensations and events of a preceding one. My prescription was very simple. I explained the view I took of the case, and told the patient he had nothing whatever the matter with him. I ordered two pairs of spectacles, one of eight-inch concaves, to be worn from morning to night, except when reading, and one of fourteen-inch concaves for reading only. The book was never to come nearer than eighteen inches, and the patient was to read three half-hours a day, at three different times, and to come and report himself in three weeks. He and his father listened to me with polite incredulity, but they probably thought any advice worth trying, and they procured the spectacles. On that day three weeks the young gentleman returned alone, his spectacles on his nose, his front erect, his whole figure expanded, his countenance beaming. He said: "I have come to see you again, because you told me to do so, but I have nothing to say except that I am quite well. I am going to be married next week, and to set to work at the bank as soon as we return from the wedding tour." I have since heard that the cure has been permanent.

It would be impossible to consider this case as other than an exceptional one; but my chief reason for bringing it before the Society is that it is exceptional only in degree, and that it represents a somewhat numerous class. There are many persons who habitually suffer from want of harmony in the action of the ocular muscles, or from circumstances which cause some of these muscles to be called upon for inordinate exertion. The symptoms in such cases are usually referred in the first instance to the eyes; but to this rule there are frequent exceptions, and I have met with several instances in which the patients complained chiefly of headache, or of temporal neuralgia, and in which they referred their sufferings to intellectual rather than to visual

exertion. Such cases are especially frequent when there is a defect of refraction which has not been corrected by spectacles; because then, the patients not having clear vision at all distances, the muscles have not had the benefit of the gymnastic training incidental to constant fixation of the eyes upon some definite point. We are familiar with the fact that defective vision in infancy, as from congenital cataract or corneal nebula, destroys the tonicity of the recti muscles, and occasions the constant objectless oscillation of the eyeballs which is known as nystagmus. In like manner, what I will call conditioned vision, in which the patient only sees clearly within a certain boundary, or in some cases only beyond a certain boundary, deprives the recti muscles of a great part of their normal stimulus, and probably in some degree impairs their nutrition. I think it follows that in every case of pain or distress about the head, the nature of which is not fully apparent, it will be a prudent precaution to examine into the state of vision and of refraction, into the strength of the recti muscles, and into the conditions under which they are called upon to act. Even if this investigation is too much to be expected in every case, it may surely be said to be imperatively called for before a patient is either sent to Australia in order to afford rest to his brain, or is advised to abandon his position, prospects, and duties in life.

VI.—*Scirrhus Cancer of Pylorus, with Encephaloid Infiltration of Left Lung and Supra-renal Capsules.* By Reginald Southey, M.D. *Read October* 23, 1874.

EARLY in the month of July 1874 I was asked by my friend Mr. Badger to see a Miss B. in consultation with him. She was 49 years of age, and looked as emaciated as a person in the last stage of pulmonary consumption. She was very short-breathed and nearly voiceless with weakness; she had a short troublesome constant cough, and some rusty-coloured and slightly blood-streaked viscid mucus she had recently expectorated was shown me.

The account given me of her illness was as follows. She had from girlhood upwards always been thin, delicate, and somewhat hysterical; slightly eccentric in character, and fanciful in appetite; seldom eating any meat, unable to touch any kind of fat, &c. For the last two years she had suffered

much with indigestion, complaining of pain after almost all solid food that she took, and frequently vomiting. Her sister said that she never eat a regular meal, but lived on a little sop and biscuits, tea and beer; for the last six months vomiting had been the principal feature of her case; indeed she told me she kept down nothing but beer and weak brandy and water, and latterly champagne only.

The cough complained of did not seem to have lasted more than six weeks or two months; it had been a dry, hacking cough to begin with, then a little scanty clear mucus had been expectorated; and two days before I saw her she had thrown up a little clear blood for the first time, after a bad fit of coughing.

Certainly this was the first hæmoptysis that had been noticed, and it excited considerable alarm both in the patient and her relatives.

Her pulse was quick and feeble, 108; respirations 38; temp. 100°. Upon careful examination I found the left thorax moved less than the right; that it was nearly completely dull anteriorly and laterally on percussion, although presenting some patches of good or even emphysematous resonance in the left supra scapular region; the base of the left lung posteriorly was dull. The right lung was resonant throughout, and furnished loud compensative respiratory sounds; the breathing all over the left lung was defective, creaking and crepitant râles were audible anteriorly, a friction sound laterally, gurgling and creaking at the root posteriorly.

There was no bronchial breathing; the vocal vibrations were little different on the two sides, but then her voice was little above a whisper. The heart's apex beat in its normal situation; its rhythm was regular, action feeble, sounds clear and distinct, præcordial limits not determined by reason of the general dulness of the left side; but the heart was not at all pushed over to the right side.

General Condition.—Tongue furred, inclined to dry skin, hot and profusely perspiring; conjunctivæ clear, but infected; abdomen empty, shrunken, and flaccid; feet cold, ankles slightly œdematous.

On the left side of the sternum, just at the juncture of the cartilage of the second right rib, was a little tumour, about the size of one half of a walnut; it felt firm, not hard, and was closely adherent to the perichondrium. The glands in the left axilla were a little enlarged, but no one larger than a horse-bean. The cervical glands on the left side in the supra

clavicular fossa were likewise a little larger than normal, but did not feel hard.

Bowels constipated, but not otherwise disordered; urine high coloured and but little of it secreted; catamenia regular but scanty.

The clinical facts which I had elicited appeared to me to admit of one of three interpretations, which it may be profitable to discuss *in limine*: First, the case might be one of chronic phthisis with nearly complete consolidation, and now progressive breaking down of the left lung, with strumous abscess forming over and implicating the sternum, with all that train of hectic fever and acute gastric disturbance which are often associated with the last stage of consumption.

Against this was to be arrayed the history: no cough until within the last two months; no expectoration until within the last few weeks; no hæmoptysis before the last few days.

Then, though the general emaciation was great, the physical and clinical evidence of any cavities in the lung was not forthcoming; further, the consolidation was entirely confined to one lung.

There was a little flattening, but no marked alteration in the shape of the chest, upon the affected side. The tumour spoken of was to the right of the sternum.

It might be phthisis; but it was no ordinary case of phthisis — tubercular phthisis supervening upon anorexia hysterica.

The second possibility was that there had existed a chronic ulcer of the stomach of long standing; that adhesions had been formed posteriorly, but that recently this ulceration had progressed through the diaphragm into the left pleural cavity, followed by circumscribed empyema, compression, consolidation, and now finally disorganisation of the left lung.

Against this hypothesis was again to be urged the history of her case. The illness, so far as vomiting and incapacity to digest solid food, extended back over a period of two years and more; but there was no record of a sudden change for the worse, which it might be reasonably expected ought to have been forthcoming when some stomach contents first passed into the pleural cavity; no account of sharp sudden pain in the left side, with breathlessness, &c., at any period in the account she gave of herself.

The third probability was cancer, primary and secondary;

primary, cancerous stricture of the pylorus; secondary, recent depositions in the lung.

Towards this diagnosis, as the more probably correct one, I was further inclined by the quite recent appearance of the little tumour upon the sternum, and the condition of the glands in the left axilla.

This diagnosis I gave therefore. A fortnight later I saw her again; she was then rapidly sinking, and maintained only by stimulants, which served to keep her excited and semi-delirious.

There was no more profuse expectoration, no more blood had been thrown up, and no symptom of any clinical moment had presented itself.

She died on (Friday) July 31, and on Saturday I was enabled, by making a post-mortem examination, to most thoroughly verify my diagnosis.

Body much emaciated; the soft superficial mass to right of sternum over junction of cartilage of right second rib consisted of encephaloid cancer.

The left lung was adherent to the chest wall; the middle and upper portion of it were occupied by an extensive cancerous infiltration, presenting all the ordinary encephaloid characters.

The posterior mediastinal glands were similarly affected. The right lung was perfectly healthy. Heart small and flabby, but valves normal.

The stomach was small and contracted; mucous membrane natural, although in parts congested. The pyloric orifice was tightly constricted by considerable thickening and cartilaginous induration. This stricture presented all the ordinary well-known appearances of scirrhous infiltration; the pyloric outlet was not completely closed, but would not have admitted the passage of anything much larger than a pea.

The intestines were empty and healthy. Liver and both kidneys normal.

Both supra-renal capsules, but especially thel eft, which was much enlarged, were the seat of encephaloid cancerous disease.

Remarks.—The clinical and pathological facts of this case present no small interest.

The cancerous stricture of the pylorus was, no doubt, the original disease. The history of early and constant vomiting corroborate this surmise; it is further, I believe, generally admitted that scirrhous cancer is of long duration, and slow

growth; at all events some facts which have passed under my own observation have inclined me to think that scirrhous cancer of the rectum has sometimes been of years' duration.

The patient had been prone to vomit, and had avoided meat and solid food from girlhood, because solids always gave her pain.

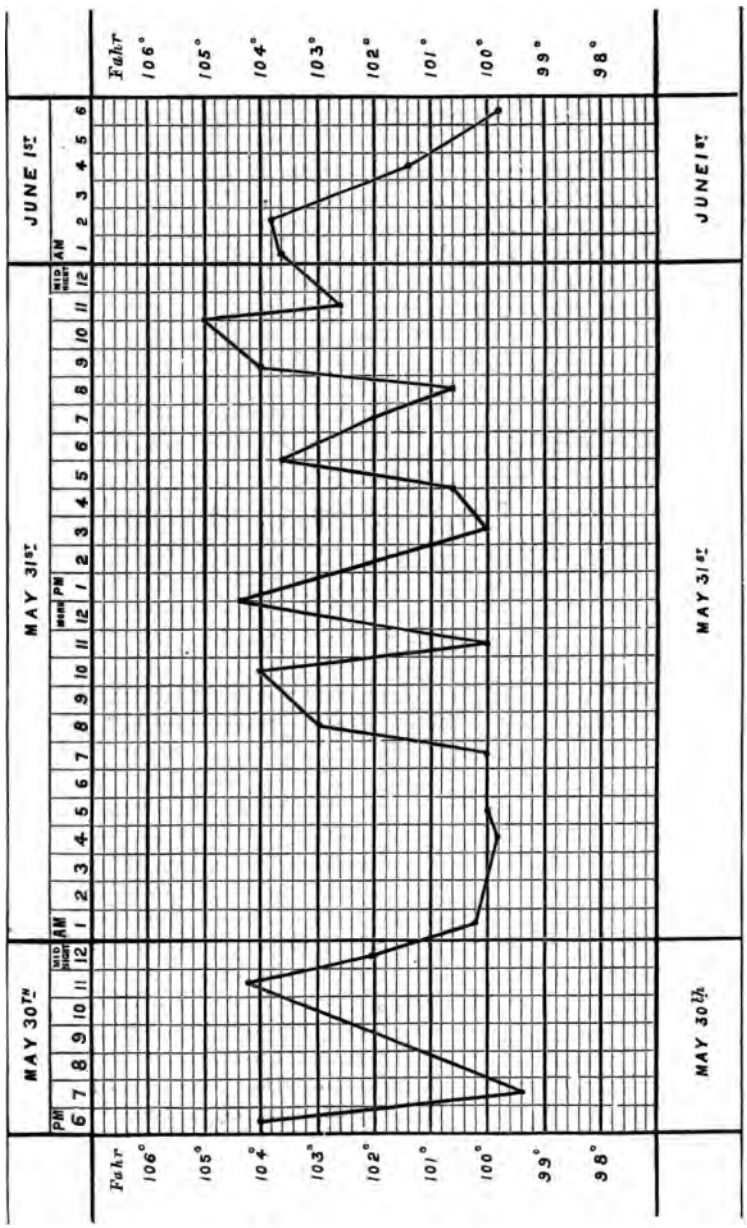
The rapid growth of the secondary cancer in lung is in accord with one's ordinary experience. But the extensive implication of the supra-renal capsules, in connection with the final excessive vomiting of all fluids, although the pylorus might be expected to have allowed passage to them, is of clinical importance.

VII.—*Case of Thrombosis, with a Needle found imbedded in the Thrombus.* By Henry Thompson, M.D. *Read October* 22, 1874.

Louisa T., æt. 21, a housemaid, was admitted May 27, 1874. She had suffered at times from globus hystericus and from palpitation, but never from rheumatic fever. Her last illness began two days before admission, with pains in the back and limbs, languor and loss of appetite, great thirst and constipation.

On admission, pulse, 135; respiration, 40; temp. 102·5°. Face extremely pale; pupils large; heart's action tumultuous; a systolic murmur at the apex; pulmonary sounds normal.

May 28.—9 A.M., pulse, 128; respiration, 32; temp. 103·8°. No sleep. Complains of pain and tenderness in the right iliac region and across the hypogastrium, but indeed the whole surface of the trunk appears to be unnaturally sensitive. Urine acid, of specific gravity 1023; contains about one-twentieth of its volume of albumen. 12.30 P.M. She is wildly delirious; the face is livid, and the lips have become dry and branny; the pulse amounts to 160, and the temperature to 105°. At 1.15 P.M. the temperature reached the maximum, 105·2°. At 2 P.M. she sweated profusely, the pulse marking 144 and the thermometer 104·5°. She was now calm and rational. At 10 P.M. the temperature, which in the afternoon had fallen to 100·2°, now rose again, and stood at 104·6°. The whole reading for the twenty-four hours gave a range of 5°, and presented three sharp-pointed peaks of elevation.



The following extract from the chart offers a fair specimen of the course of the temperature during the earlier stages of the disease.

29.—Slept five hours, with brief interruptions, and is now perfectly sensible and composed. At 10 A.M., after a severe rigor, the temperature reached 107·4°. From that point it sank spontaneously amidst drenching perspirations, until in the evenlng it fell to 100·4°. Ordered quinine 5 grains, and tincture of digitatis 5 minims every four hours, along with a daily allowance of brandy 1 ounce, and port wine 4 ounces. At 9.30 a second rigor, preceded by pain in the back, and followed by flushing and sweating; temp. 105·4°. At 11.30 P.M. a third rigor; temp. 105°. The whole range for the twenty-four hours amounted to 7·4°, and included three well-pronounced culminating points with two secondary projections.

30.—At 10 A.M. an irregular sharply-defined crimson flush overspread the metacarpo-phalangeal joints of both hands. Brandy increased to 6 ounces daily. At 1.30 P.M. temp. 105°. Great hyperasthesia, chiefly in the upper regions of the abdomen. At 6.15, temp. 104°; at 6.45, 99·4°—a fall of 4·6° in half an hour. Whole range for twenty-four hours 6·6°, showing two pointed peaks and one long sloping crest.

31.—Slight delirium. Complexion pale and earthy, but without a trace of jaundice in the conjunctiva. Tongue dry and brown. Sonoro-sibilant râles throughout the chest. Brandy increased to 10 ounces daily, and quinine to 10 grains every four hours, or 1 drachm in the course of the day. At 1 P.M. face coloured purple in patches like the mottling on the skin of a corpse. At 9 P.M. a rigor; at 10 P.M. deafness and noises in the head; temp. 105°, the maximum for the twenty-four hours. Range 5·2°, comprising four well-marked apices of elevation.

It is simply impossible to give the details of the residue, diffused, as they are, over a space of fifty-three days. In the main the disease advanced at a singularly slow and monotonous pace, each succeeding day for the most part, but not invariably, repeating its predecessor. The most frequent and the longest breaks in this monotony took place in the month of June, when the girl really seemed to have some enjoyment in life. On nineteen days in the series of fifty-three there occurred distinct and definite rigors; on four days mere chilliness; on seven, vomiting. Sweating as a rule followed shivering, and sometimes appeared to replace the rigors altogether. In the same way vomiting or faintness either concurred with the paroxysm of shivering or played the part of its representative. Whatever the mode of mani-

festation, the temperature at the time of the outbreak almost always culminated in a peak; on six days, at 105° or more; on twenty-three days at 104° or more. On the other hand the remissions kept steadily above the normal standard, save on two occasions only, until June 23. From that date, during the month preceding death, they were found to be subnormal, or even below that level, on seventeen days. One of these days presented a maximum of 105·6°, and a minimum of 96·6°, yielding a range of 9°. The lowest reading recorded is 95·6°. During the last week of life the exacerbations subsided, contracting the range within a narrower compass, and giving more the character of continuity to the mean average, whether this result be regarded as owing to the near approach of death or to the wear and tear of exhausting diarrhœa at the close. As to the course of events in general, one paramount circumstance requires to be noted in the foremost place. Phlegmasia alba, with conspicuous enlargement of the superficial veins appeared in the left lower extremities on June 8, the fifteenth day of the disease, and in the right on July 8, the forty-fifth day. In both extremities it remained to the end. A rather noteworthy circumstance is the presence of signs and symptoms closely resembling those of pericarditis from June 8 to 16. A third is the presence of pain in various regions of the spine, usually of an aching character, causing faintness or actual syncope, and sometimes, but not always, coinciding with rigors or with a high degree of pyrexia. For the rest suffice it to say, that after severe suffering from diarrhœa, with pain and tenderness in the epigastrium and abdomen at large, and after a prolonged period of delirium or unconsciousness, now and then broken by a few lucid intervals, death took place on July 23, fifty-nine days from the date of invasion. As for the treatment, the dose of the quinine was raised on June 21 to 15 grains every four hours, or to a drachm and a half in the day, while stimulants were liberally administered throughout, and anodynes, hypnotics, and astringents from time to time, to meet the requirements of the case.

The blood was twice examined under the microscope during life. The white corpuscles were found to be inordinately numerous, and the red shrivelled and otherwise deformed, but no bacteria or microzymes of any kind could be distinguished. The clots discovered after death were not examined.

Autopsy from the Report of Mr. R. H. Lucas.

In the head were found a number of minute extravasations beneath the lining membrane of the third ventricle. No softening or abscess could be detected anywhere; the membranes were not congested, nor was there any lymph upon them.

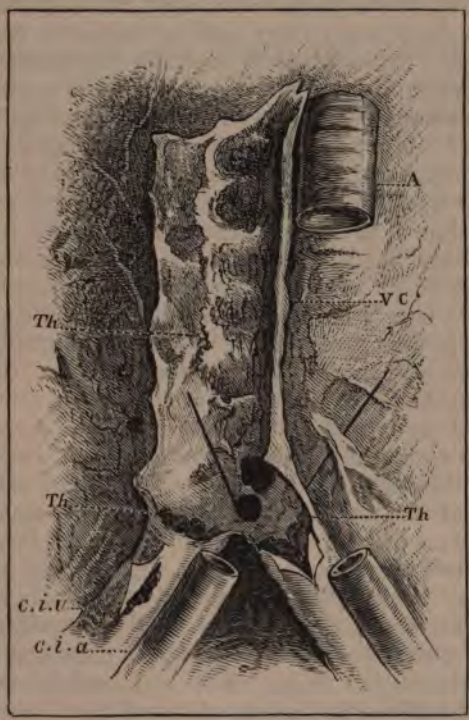
In the thorax there were sub-pleural ecchymoses observed all over both lungs, but not over the chest-walls. The substance of the lungs was œdematous and pale for the most part, but congested at the bases. There was no abscess or appearance of consolidation to be discovered. The bronchial tubes were not inflamed. The cavity of the pericardium contained about one ounce of clear straw-coloured fluid, and there were one or two white patches over the left ventricle firmly adherent and tough. The left auriculo-ventricular orifice measured 4 inches. The mitral valves were somewhat thickened, and presented a chain of small vegetations along the auricular margins. The substance of the heart was flabby. In the abdomen the vená cava inferior, from the junction of the renal veins to its bifurcation, was filled with a partially decolorized blood-clot adherent to the wall of the vessel, but easily detached from it. A channel containing a recent coagulum extended down the centre of the plug. At the bifurcation the vessel was filled with dirty-brown matter, and in the midst of this a needle was noticed resting in an oblique direction with its eye pointing downwards and slightly to the left, in close relation to an opening in the back of the vein about an eighth of an inch in diameter. Immediately above this another opening existed measuring one quarter of an inch. Through these apertures the body of the fourth vertebra could be felt denuded of its periosteum. The left common iliac vein was very large and filled with a brownish-red clot of moderately firm consistence and slightly adherent. The left external iliac and left femoral were as small as a crow-quill, and were completely occluded by a whitish fibrous plug, which could not be detached from the wall of the vessel. The right common iliac, right external iliac, and right femoral, were obstructed and narrowed by a tough fibrous-looking firmly attached layer, its inner surface covered with thick patches of coarse yellow material which could be easily stripped off. The vessel, however, was not completely occluded. Situated immediately to the left of the third lumbar vertebra, and the intervertebral substance below it, was an

abscess, the walls of which extended to the margin of the psoas muscle, and involved the outer coat of the left common iliac artery. On opening this abscess, which contained about half an ounce of pus, a second needle was seen lying obliquely across the body of the third lumbar vertebra on the left side, with its point directed downwards and to the right. The substance of the vertebra, however, was not eroded. The vessels in this situation were all matted together, and were with difficulty separated. Liver engorged with blood, especially in its left lobe. The spleen, large and firm, weighing 10 ounces, presented a yellow-coloured infarction about the size of a marble, raised above the surface and softening in the centre. A few smaller masses of unsoftened yellow deposit were found scattered here and there about the circumference of the organ. Intestines much injected. Mucous membrane the seat of extensive catarrh. Kidneys normal.

The annexed engraving is taken from a sketch by Mr. Hepburn.

The phenomena presented by the foregoing case, during life and after death, are alone sufficient to entitle it to a place in the records of disease, whatever opinions may be formed with reference to its pathology, and by whatever name it may be designated. Many would call it a case of pyæmia; or, if not pyæmia, at all events septicæmia; some, perhaps, would be content to class it under the head of simple thrombosis, with accompanying abscess in the environment of the vessels involved. It is certainly remarkable that, in a case so strikingly characterised by the very conditions presumed to give origin to pyæmia proper, so long protracted, and so faithfully representing pyæmia in its general features, no unequivocal secondary deposits could be discovered anywhere. It is true there were spots of submembranous hæmorrhage found after death, but these are not secondary deposits as commonly understood, nor are they peculiar to pyæmia in the limited sense of the term. Again, it is true the spleen was large and contained infarctions—one of considerable size and prominence, surrounded by the usual halo of blood and already in course of softening; but even these appearances are at best indecisive in the presence of vegetations on the valvular structures of the heart. It cannot be said, therefore, with absolute assurance of certainty, that there were any deposits at all secondary to pyæmia, and it may well be to this very immunity of the viscera and vital organs that we must ascribe the long duration of the dis-

ease. May we ascribe the immunity itself in any degree to the influence of quinine in controlling the processes of infection, inflammation, and suppuration, as an antiseptic and antiphlogistic? It would really appear at first sight as though there were some truth in this hypothesis; but in order to lay down the law on the question at large, we should



A. Aorta, the lower portion of which has been removed, showing a needle imbedded in the tissue behind the vessel.
V C. Vena Cava, laid open along anterior wall, contains thrombus (*Th.*) adherent to posterior wall. At lower extremity—the posterior wall of vessel ulcerated in two places—a needle is partly lodged in one of the ulcerations. *Th.*, thrombus in cava and in common iliac veins (*c. i. v.*); *c. i. a.*, common iliac artery.

require a hundred cases, fifty treated with quinine, and fifty without. Whether the quinine made any strong impression upon the temperature is a point far easier to raise than to resolve. During the exhibition of the remedy in daily aggregates of a drachm and a drachm and a half, the mean average undeniably ruled lower; but there were times when the fever-heat culminated at the same high level as before—

if we exclude the solitary rise to 107·4°—and there were times when the oscillations and aberrations were as frequent and fitful as ever. The low scale of the last eight or ten days, and in particular the depth of the remissions, cannot with certainty be placed to the credit of the quinine; indeed, throughout the whole career of the case it is impossible to say how many of the phenomena were the results of medical interference, how many mere natural stages in the march of the malady. I have ignored digitalis altogether; the dose was not large enough to be of any material moment. Perhaps some persons may make the same remark on the quinine itself. Mere reduction of temperature, however, is here a matter of comparative insignificance. If it be regarded as part and parcel of the antiseptic and antiphlogistic operations of quinine, then it is chiefly valuable as an index and measure of good accomplished. If it is to be looked upon independently in the light of an agent for the accomplishment of good, it must surely be well-nigh powerless in the face of so fearful a plague as pyæmia or septicæmia, engrafted as they are on lesions and morbid conditions far beyond the reach of mere refrigeration. To give quinine with this purpose would only amount to lopping off a branch, when our endeavour should be to strike home at the root.

As for the presumed origin of all the mischief, the swallowing of the needles, it must have been owing to inadvertence and momentary distraction of mind. Hysterical the girl undoubtedly was in some slight degree; but amid all the mad freaks of incorrigible hysteria it can hardly be imagined that a woman would deliberately swallow needles, although women are well known to have stuck pins and needles in various parts of the body. The girl was in the habit of holding these things in her mouth, and in a moment of forgetfulness, under the excitement of any passing circumstance, she might easily swallow one. In truth, her family yet preserve a shawl-pin which she swallowed in this way, on being hastily summoned by her master. For thus much—for the element of excitability and absence of mind—the hysteria may fairly be held responsible, but for no more.

VIII.—*Two Cases of Reflected Irritation.* 1. *Unilateral Trismus caused by a Wound in the Temporal Region.* 2. *Severe Epilepsy cured by Excision of a Neuroma.*

By RICHARD BARWELL. *Read November* 13, 1874.

THE effects occasionally produced by local irritation are not only in themselves interesting, but are also important in a sense both pathological and clinical, as destined probably to furnish a clue to the solution of many doubtful points in the natural history of spasmodic and convulsive disease. It appears to me, therefore, that any cases in which such malady can be clearly traced to a local condition must have its value; and it is with this view that I venture to bring to the notice of the Clinical Society two such instances, which occurred simultaneously in my hospital practice during the present year. The first is one of unilateral trismus.

CASE I.

Edward D., æt. 15, was admitted on July 1, 1874, into Charing Cross Hospital, under my care, with a severe scalp wound over the temporal region, caused by a blow from the shaft of a cab. The stroke had stripped off a horse-shoe shaped piece of integument convex forward, laying bare the left side of the occipito-frontales aponeurosis, and in one part a small portion of bone; also the front part of the temporal fascia. There was some little concussion, the hæmorrhage was slight. The flap and the exposed part were carefully washed and syringed with a weak solution of carbolic acid (1 in 60), and adaptation was secured with plaister.

July 6.—Suppuration thoroughly set in. There was considerable phlegmonous swelling, extending to the forehead, eyelid, and cheek of the same side.

8.—Wound still discharging freely, swelling slightly extending. There was also some enlargement of the cervical glands from the ear downward.

13.—The phlegmon has subsided, while enlargement of the glands remains much the same. The patient complained in the evening of considerable pain in the jaw, entirely on the left side. Temperature 103·8°, pulse 90.

14.—I found the patient quite unable to open the

thing, will bring on an attack. He says his memory is rapidly going.

The attacks were of course watched, and found to be distinctly epileptic; the scream was rare; they commenced with rapid congestion of face and neck, dragging of head over right shoulder, and twitching of the stump and of left leg, while the right side was nearly quiescent. Breathing quick, with trumpety expiration; slight foaming at the mouth.

July 19.—Mr. Jolly, my house surgeon, was examining the stump, when the patient was partially recovered from epileptic stupor, and finding on the inner side a lump, he directed especial attention to it, squeezed it no doubt a little, and the man had immediately a fresh set of convulsions.

22.—I have examined the relation between irritation of the tumour and the epileptic fit sufficiently to be convinced of its reality, and have forbidden to students all further experiment. The wound of the right wrist must heal, or nearly so, before anything further is undertaken.

Aug. 6.—For reasons connected with the state of the wards, now being cleaned and painted, I have endeavoured to postpone the operation long ago determined on; but the fits have become so frequent and prolonged that the man seems hardly to recover from the stupor of one attack before he has the convulsions of another; a free interval of more than a quarter of an hour is a rarity. Accordingly the operation was fixed for the following day.

7.—Chloroform was administered, which brought on a paroxysm. I cut down upon, laid bare and isolated the neuroma; it appeared to include all the descending nerves of the brachial plexus. Taking the tumour in my fingers I stretched these nerves with some little degree of force until I felt a distinct crack, cut them through as much as possible at different levels, and removed the neuroma. Some smart bleeding took place from the divergent branches of the truncated artery; it was soon checked. On the 13th the ligatures came away; some slight inflammation had occurred at the wound.

18.—Man discharged and wound healed.

Since the operation this man has never had an epileptic fit. I saw him on Oct. 24; he was looking far more intelligent and healthy; he says he can think now and remember everything.

A careful examination of the tumour was kindly made for me by my friend Dr. Bruce.

On dissecting the fat the tumour was found to consist of

two portions, a proximal and a distal united by an intervening isthmus; into the former two nerves, a large and a smaller one, could be distinctly traced; one large nerve appeared to run by the side of it, and to pass to the lower enlargement. A transverse section of the first-named nerve as it entered the tumour was treated with hematoxylin, and exhibited under a high power of microscope a plexus of nerve tubuli and their arrangement. Section through the tumour similarly treated exhibited nerve tubes separated from each other and compressed by intermingled fibrous tissue, which ran in a direction chiefly transverse to the tubuli. It was also plain that some of the nerve fibres which passed through the proximal tumour formed the substance of the isthmus and then ran into the distal tumour, while others which entered the upper tumour came simply through it, merely skirting the lower mass.

Both tumours, therefore, are true neuroma, and the involvement of nerve tubes with dense fibrous tissue is well marked.

IX.—*A Case of Recovery from Melancholia, after refusal of Food and obstinate Silence during four years.* By Thomas Buzzard, M.D. *Read November* 23, 1874.

On June 3, 1870, I was summoned to a gentleman who had just arrived with his wife at a West-end hotel from a distant part of the kingdom. The patient was 40 years of age, of compact build, and well-nourished frame, with a fresh complexion and dark hair unmixed with grey. I found him with a very distressed aspect, restlessly moving about the room and unable to apply himself. He told me that he had a dreadful disease, and was growing into a kind of monster, that he had 'seen crows about the house,' and 'a coffin had passed his door on the day he quitted home.' These last, it seemed on inquiry, were not imaginary incidents, but they had impressed him powerfully as being ominous of evil. He fancied, too, that the crows and also the cows followed him about and watched him. He informed me more than once that he was not worthy to live on account of the dreadful disease which he had. It appeared that his nights had been

bad for a week past, that he had remained in bed one entire day, and refused to take any food.

Family History.—His father died, æt. 50, in what appears to have been a condition of paralytic dementia.

Previous Medical History.—The patient was naturally an active man of business, and accustomed besides to the hunting field. His habits were strictly temperate. He was described as being of a nervous temperament; easily annoyed by trifles, but ordinarily enjoying good health, interrupted only by an occasional 'bilious headache.' During the past winter, however, he had complained much of indigestion and want of appetite, and had lost heart about his business. He had been married seven years, and had three living children. He had not suffered from syphilis. In 1866 the loss of a little girl had given him a great shock, which, as he afterwards told me, he had never altogether recovered. His friends, however, saw nothing in his manner to make them suspect this. He had passed gradually into his present state of mental depression, and had been brought to London for medical advice on account of it.

Progress of the Case.—On the following day Dr. Maudsley saw the patient with me, but we could not get him to utter a word. His condition of melancholy increasing, it soon became necessary to certify him, and he was at first placed with two attendants in a cottage. Whilst there he saw devils and frightful things, and refused to take food, under the conviction that he was going to be poisoned. On June 22 it had become evident that the case could not be dealt with properly except in an asylum, and the patient was therefore transferred to Dr. Stilwell's, Moorcroft.

On admission he was carried into the house, refusing to help himself in any way, and constantly repeating 'No use in the world.' On food being offered to him he said that he had no inside, and could not take it. When his mouth was forcibly opened, semi-liquid food could be conveyed into it by a spoon and was swallowed.

From this time he ceased to speak except on one occasion, Jan. 1, 1871, when he asked for a drink of water. Silent and expressionless in the face—except when food was administered to him or he was being questioned, when he knit his brows, exhibited signs of irritation, and made a sort of grunting noise—he lay helpless, suffering himself indeed to be washed and dressed and placed in a chair, but never rendering any assistance whatever. The visits of his relatives

and of his medical attendants produced no sign of recognition, but he groaned and shrunk away if he was touched, and resisted having his eyes or mouth opened. Propped up in a chair he lay back with his eyes closed, and an appearance of absolute indifference to what was going on in the room. He would not stand, and indeed rarely moved any muscles voluntarily, except those of his face by which he indicated displeasure at anything that was done to him. On some few occasions, however, when he had been purposely left alone and was watched through the keyhole, he was seen to sit up and look out of the window; in the presence of others he never did this. He was kept alive entirely by outside help, and manifestly against his inclination, for in no single thing would he render any assistance. He appeared to place himself as much as possible in the condition of an inanimate body, suffering himself to be cared for and fed under the protest of black looks, clenched jaws, and inarticulate grunting, but without any vigorous resistance. In the process of being fed the mouth was opened by the introduction of a wedge, and the food was conveyed in a spoon to the back of his tongue, when it was swallowed. He never put up his arms to prevent this. Thus his life can best be described by negatives; so far as in him lay he would do nothing to carry it on, but he made no violent resistance to others doing this for him. In my visits to him I felt sure that he knew me, though he failed to show any ordinary sign of recognition. I talked to him of his wife and children, picturing their distress, reminding him of his neglected business and the inevitable disorder of his affairs which his condition was producing,

'Yet *he* neither spoke nor moved.'

One day, when this state of things had lasted for nearly four years, a brother, who was visiting him, talked about his eldest boy, for whom he had a strong partiality. He showed vehement signs of irritation by frowning and grunting. Dr. Maudsley and Dr. Stilwell, who were present, remarking this more than ordinary agitation, spoke about bringing the lad to see his father. A few days afterwards (May 6, 1874), on his attendant proceeding to feed him in the morning, the patient asked for a cup of tea. The ice thus broken, he spoke and took his food naturally, suddenly and completely changed his behaviour, exhibiting now as great a desire to live as he had before appeared to court death, and very speedily was restored to perfect health.

I visited him on the day after this waking up into social life. He was seated in a chair, looking perfectly calm and unembarrassed, and he talked fluently in spite of his long silence. I asked him if he had talked to himself during this time. He said that he had not, nor had he read anything except on one or two occasions when his attendant was out of the room and he had got hold of a piece of newspaper placed for lighting the fire. He had, however, kept record of time with great accuracy. About two years ago he lost count of it for fourteen days, but regained it by listening to the conversation of his attendants. On May 5 he began to think, 'If I could only succeed in speaking,' and he determined to try. When left to himself in the afternoon, he commenced framing and stringing words together, but not saying them aloud. He remained awake all that night, thinking he would try to speak to Dr. Stilwell next day, and when the man came to feed him in the morning he contrived to speak. I remarked that during our conversation he never smiled.

On June 15, having left Moorcroft a couple of weeks previously and visited the seaside, he called upon me in town, and I had again some conversation with him. He was looking very well and in excellent spirits, though he had not as yet quite regained strength, and there was some little œdema of his legs. He could then walk a mile, though at first, and for several days after his recovery, he had been unable to stand. He said that he could not account for his behaviour, but had felt that no power on earth could make him speak or eat. He was perfectly conscious during his illness, remembered every one of my visits, and all that I had said to him. A powerful impression of degradation had dominated him. He had felt that he ought not to live, that he was a monster, and that the birds he had heard singing on the trees outside his window were rejoicing at his disgrace and mocking at him. According to his account during his illness he did not perspire, but on his recovery his skin immediately began to act freely, and I learnt from others that it then exhaled a powerful and nauseous odour which made his company very disagreeable. He told me that he had tried hard to provoke his attendant to injure him, but without effect, and spoke in warm terms of the man's constant patience and kindness. His sleep it seems had been much broken, never extending, he said, to more than two hours at a time, and always accompanied by frightful dreams and nightmare.

A month later he again came to me, apparently in perfect health and strength, having picked up three stone weight in five weeks. It was interesting to learn that his digestion, which for months before his illness had been very bad, was now perfect. He had been staying at the seaside, and had swam in the sea every day.

In August I heard from him from his own home, to which he had now returned, and he described himself as enjoying perfect health and spirits.*

The patient whilst at Moorcroft was seen repeatedly by Dr. Maudsley, and on more than one occasion by Sir William Gull.

The following, with some variations from time to time, represents the kind of dietary scale which was employed in this case:—

For breakfast the patient had 12 oz. milk with grated bread, sweetened. At noon two eggs beaten up with 3 oz. sherry. 2 P.M. soup, with fresh vegetables infused in it, and thickened with 2 or 3 oz. minced meat. 5 P.M. two eggs, with 3 oz. sherry. 8 P.M. Oswego, or minced meat and soup, with vegetables. 10 P.M. Liebeg's essence or clear soup. In the course of the day he had besides an ounce of cod-liver oil and 20 minims of tincture of iron.

At an early period of his illness he began to reject a portion of each meal as soon as it was swallowed, and this appeared to be done by a kind of rumination. This habit of rejection continued throughout his attack, but ceased immediately on his recovery, and he told me that he could not then succeed by any amount of voluntary effort in bringing the food back into his mouth. I need not dwell upon the drug treatment which was adopted. At various times we gave him $\frac{1}{8}$ gr. morphia twice a day by hypodermic injection, and he also had some arsenic and bismuth. These were given with the idea of enabling him to digest more food. But we had no reason to think they were of any advantage to him.

His normal weight in exercise was 11 st. 10 lb. In the course of his stay at Moorcroft this weight was reduced, in Sept. 1873, to 6 st. 12 lb. 6 oz., but it afterwards again rose to an average of $7\frac{1}{2}$ st. On May 5, the day before his recovery, he weighed 7 st. 3 lb. Three days after this he had gained 6 lb.

* The patient called upon me in May this year. He remained quite well, and was actively engaged in business.

It was noted that although his body generally became exceedingly thin, as may well be imagined from his enormous reduction in weight, his face did not show proportionate signs of emaciation. His pulse used to number from 80 to 90 feeble beats; his chest sounds were always normal. In Oct. 1872 I suggested that beef tea thickened with pounded fresh pancreas should be injected into his bowel, and this was done, but without success. He would strain and reject it very rapidly.

An effort was made on one occasion to rouse him by the application of faradism to his chest, but was discontinued, as it caused alarming distress and faintness.

During the whole four years he never had a natural action of the bowels, but due relief was brought about by an enema of water twice a week, with the addition occasionally of turpentine or castor oil. As regards the action of the bladder, the attendants learned to interpret certain signs of uneasiness as indicating a desire to pass urine, which he effected voluntarily. He slept for the most part without the help of sedatives.

Remarks.—This case is remarkable on account of the length of time during which the patient remained in a profound state of insanity, and yet in the end completely recovered. That the prognosis is tolerably favourable in this form of disease is generally allowed. Dr. Maudsley* says, 'When recovery does really take place, as it does in half, or even more than half, of the cases of melancholia, it is usually gradual, and takes place within from four to twelve months from the commencement of the disease. After twelve months a favourable result, though less probable, is still not hopeless, for there are instances on record in which recovery has taken place after the disease has lasted years.' Dr. Blandford, in a paper contributed to the 'St. George's Hospital Reports,' vol. ii., relates three cases in which recovery took place after illness of seven, six, and five years' duration. He has mentioned to me besides, as the result of his experience, the important fact that cases of melancholia represent the only form of insanity in which recovery does ever take place after so long a period.

The example which I have brought forward may certainly well serve as a lesson to us not to reject the possibility of recovery even when a patient has settled down for so long a

* *Physiology and Pathology of the Mind*, p. 338.

time into a condition which his friends are apt to regard, as indeed happened in this case, as of a perfectly hopeless character. As regards the pathological nature of this man's ailment, I regret that I have no explanation to offer. The course of his malady and its mode of termination make it sufficiently evident that the lesion, whatever it was, was not of a destructive character. It must have been what we are accustomed to style 'functional' or 'dynamic.' Under these circumstances there seems no good reason why by some happy application of therapeutics, he should not have been rapidly cured. Practically our treatment consisted in strenuous efforts to sustain a life against the owner's wish, and in this we were successful. But one cannot help hoping that ere long the progress of science may develop some method of dealing with such a case which may be more creditable to medical art. Two suggestions occur to me in reference to this point.

1. Is it possible that we made our patient too comfortable, and that if we had caused his condition to be less endurable, he would have been provoked into throwing off his dominating impression?

2. The fact that he woke into mental sanity a few days after an arrangement had been made in his hearing that a favourite child—whom he had not seen for four years, but of whose seeing him in his then state he had the greatest horror—should be taken to him, suggests the idea that some means of bringing a powerful emotion to bear upon the patient might have been attended with good results at a much earlier period of his illness.

X.—*Case of Melancholia.* By Sir W. W. Gull, Bart. *Read November* 13, 1874.

ON June 15, 1869, I was summoned into the country to see the Rev. A. B. I found him labouring under melancholia, with delusions as to inability to take food.

The following notes were made on his admission into Ticehurst Asylum, two days subsequently.

Age 61. Has been ill a week. Hair gray and scanty. Features rather coarse. Expression of countenance gloomy. Dejected. Self-absorbed. Pulse 88. Tongue natural. Skin moist.

Mental Condition.—Extreme despondency. Agitation. Manner abstracted. Will not answer questions readily, fancying that he is ruined, and has no money to pay for being here, notwithstanding that he is a man of large fortune. Two years ago his manner became altered; he was more reserved, irritable and desponding. Has been doing clerical duty up to the Sunday before the attack, and also managing his estate.

June 21.—Refuses food, but still will take some out of an ordinary drinking-cup. Pupils dilated. Pulse 94 and soft. Bowels acted well yesterday. Slight perspiration of skin. Secretions healthy. In the evening would take no food voluntarily. Pulse 98.

23.—Is calmer to-day, but does not answer questions. Walked in the gardens.

24.—Delusions about urine, that the ordinary vessel is not large enough to contain all he makes; also that the bowels are completely full. He talked more to-day. Has a horror of going to bed, saying with earnestness that if his bowels acted in the night the whole place would be destroyed by the quantity. The bowels have not acted for two days. Urine, sp. gr. 1020, acid, normal. Weight of body 136 lbs.

July 10.—Delusions and bodily condition unchanged. Bowels never act without an injection. Breath very offensive.

13.—To-day absolutely refused to be fed as before, and was obliged to be fed by the stomach-tube. This was done every four hours, night and day.

23.—The diet consists of turtle-soup, gruel, and beef-tea; yelk of eggs, with milk. In the past twenty-four hours he has had 1 quart bottle of champagne, 2 bottles of stout, and 4 wine-glasses of brandy. Under this treatment he has rallied wonderfully. He is not nearly so restless and excited, sleeps better at night, and is rapidly increasing in flesh. Pulse 100. Bowels acted yesterday and to-day, after ℥ij castor oil.

31.—Continues to improve. Slept six hours during the night. Principal delusion now is that he cannot eat. Declares that he would willingly help himself to food, but that it is an utter impossibility to swallow. Still fed by the stomach-tube every fourth hour.

Aug. 9.—Has been again very restless during the last two nights. Complexion sallow, with a very melancholy

expression. Weight 125 lbs. To have 2 table spoonfuls of cod-liver oil during the day, in addition to his other food, which is the same as before, minus the champagne and turtle-soup. He has now 6 glasses of sherry, 2 of port, and 2 of brandy in the twenty-four hours.

13.—Was visited to-day by myself. Ordered tinct. opii at night; also a more mixed diet, including potatoes and other vegetables, as purées.

Sept. 11.—Has improved greatly in appearance. Slept for six hours on three consecutive nights. Becomes more obstinate; objects to being dressed, and refuses to show his tongue or allow his pulse to be felt.

Oct. 8.—Aspect improved; sleeps on the average five hours. Fed by stomach-tube five times in the twenty-four hours.

Since last report has been improving rapidly in bodily health. Weight now 131 lbs., which makes an increase of 5 lbs. per month. His complexion has become much clearer and his eyes brighter. He sleeps uncommonly well, five hours on the average. Bowels act every third day, after an injection.

At the end of the year 1869 the patient became more ill. Countenance pale and haggard. When asked if he suffered, said in a low voice, 'Dreadfully;' but when pressed as to the seat of pain, would say no more than 'I wish you would all leave the room.' The abdomen became distended, and the pulse quick and feeble. At this time I was summoned by telegram to Ticehurst, and found my patient feeble, and almost collapsed. A light diet of farinacea, broths, cream, milk, brandy, and wine, was given every four hours by the stomach-tube. The result was satisfactory. The patient soon rallied, and on January 31, 1870, I find the following notes in the Asylum report:—'Patient now looks uncommonly well. Getting stout in the face. Sleeps well at night. Pulse full and strong.' This improvement continued.

On May 18, 1870, I visited the patient again. As there was marked sponginess of the gums, lime-juice was ordered to be added to the food, which still consisted of vegetable purées, eggs, stout, &c., and the addition from time to time of 2 to 3 oz. of olive oil, as there was much intestinal obstruction. Patient's weight now 132 lbs. Drives out in donkey carriage.

At the end of 1870 the aspect of the patient was healthy, but the same obstinacy as to taking food continued.

In May 1871 some food was given by spoon, but it was so tedious, and attended by so much resistance that it was discontinued.

No special report during the remainder of 1871.

In March 1872 there was distinct emaciation; weight only 122 lbs. The diet was then as follows:—9 A.M. yelk of egg, 2 oz. brandy, 1 pint milk; 1 P.M. 4 oz. sherry, 1 pint soup, with vegetables; 5 P.M. 2 oz. sherry, 1 pint soup, with vegetables; 9 P.M. yelk of egg, 4 oz. sherry, 1 pint soup. This was subsequently varied with a pint of milk instead of soup, and with the addition of ℥ss cod-liver oil, emulsified by gr. xv of bicarb. potassæ. May 1, 1872, the weight was 130 lbs., and Sept. 13, 132 lbs.

In the end of December 1872, the patient was more ill and restless, with tympanitic abdomen, anxious countenance, offensive breath, pulse quick, small. This appeared to be due to great accumulation in the colon, which was corrected by the use of the long tube and injections of oil and turpentine. After this the patient rallied into his usual state.

During the night of Jan. 6, 1873, he asked attendant for a glass of water. This was the first time he had taken anything voluntarily since July 13, 1869. After taking the water he assured the attendant he had not drunk it, and could not think what had become of it.

The inactivity of the colon continued to trouble him on and off for some time, but was overcome by enemata and by the addition of olive-oil to the food, with occasionally ♏i of croton oil, or a small dose of podophyllum.

In June 1873 the weight had increased to 142 lbs.

The diet was then—9 A.M. yelk of egg, ℥jss brandy, new milk, 1 pint; 1 P.M. pint soup, with vegetables, 2 oz. olive-oil, glass and a half of brandy. The same repeated at 5 and 9 P.M.

No special report for the remainder of the year.

In January 1874 weight was 156 lbs.

In March 1874 the following report was made in the Asylum note-book:—'Still very irritable, but converses freely with attendant and others on the topics of the day. Reads newspaper, and bible and prayer book in the morning. Persists that he has no gullet or stomach; that he never ate anything nor went to the water-closet for sixty years before coming to Ticehurst, and that is the reason of his not doing so now. Says there is not such a thing as beef, mutton, beer, or any food, in the world. Mr. A. B.'s friends say that

he was never looking better than at the present time. Food has been placed near him, as an inducement to him to eat, but as yet his delusions are too strong for him to do so. He has been fed with a spoon at various times, to show him that he *can* swallow.'

'March 4, 1874.—He has now been fed with the stomach-tube 7,647 times without any injury to the fauces. The time occupied in feeding has been forty seconds, fifteen of these being taken up in filling the stomach. This operation has always been performed by a medical man. On each occasion of my visit to him I saw him fed. His weight June 24, 1869, was 136 lbs. On March 11, 1872, 122 lbs. His present weight 156 lbs.

'The olive-oil, ℥iv in the twenty-four hours, was commenced Jan. 24, 1872, and continued to the 16th of the following June, from which time to the present olive-oil ℥vj have been given daily. Until the exhibition of olive-oil he was subject to obstinate attacks of constipation; since then, when the bowels have been inactive, podophyllum gr. ¼, followed by decoc. aloës ℥ij at night, and an enema in the morning, has produced profuse relief. He has had no obstinate constipation for fourteen months.'

Since that date there has been no important change. The colon gets frequently loaded, and requires local treatment by enemata.

Nov. 12, 1874.—Dr. Newington has had a long conversation with the patient on matters connected with the restoration of the cathedral in which he is most interested, on which subject the patient is perfectly rational; but the delusions respecting the power of swallowing are unaltered. Dr. Newington reports to me this morning (Nov. 13) that the patient has been fed 8,700 times without injury to the fauces, and ends as follows:—

'The mind of this patient has considerably improved during the last six months, he being now able to sustain a continued conversation, and, with the exception of his delusions, he is able to talk on all subjects rationally.

'He appears to have no bodily ailment; he is looking fresh and healthy, and the breath is sweet. It was the opinion of Sir W. Gull, from the commencement of the illness, that this patient would ultimately recover. There is now every possibility of this event taking place.'

XI.—*A Case of nearly fatal Poisoning by Hydral Chlorate*

By J. W. Hulke, F.R.S. *Read November* 27, 1874.

FEW medicines, perhaps, have within so short a period of their first introduction by the profession, obtained so wide a use by the public as chloral hydrate, and fatal accidents from its indiscriminate exhibition are believed to have happened. I am informed, however, that few such are recorded. As a contribution, therefore, to my knowledge of its effects in a poisonous dose upon the human subject, this note, transcribed, nearly as it stands, from my case-book, may not be without interest to the Fellows of the Clinical Society.

One day last winter, about one o'clock, as I was leaving home for my hospital visit, a messenger, in great haste, begged me to go instantly to a neighbouring hotel to a lady who was feared to be dying; it was thought she was poisoned. Bidding him fetch a physician, I immediately went to the hotel —not more than fifty yards' distance—and found a young, fashionably-dressed lady, apparently about 23 years old, stretched upon her back on a bed, perfectly insensible, breathing slowly and laboriously, almost stertorously, her face dusky, her radial pulse small and very weak, and her pupils extremely contracted. A medicus (then and still unknown to me) was cutting open the front of her dress for the purpose of freeing her chest. He told me that the lady was believed to have taken chloral, and he asked me to do whatever I thought proper. To empty the stomach, and endeavour to maintain life and gain time for the elimination of the absorbed poison, were the obvious indications. An emetic could not be given. I therefore ran for my stomach-pump, and on returning with it I found that Dr. M. (her physician) had arrived to share our responsibilities, and the patient's feet were being put into a pan of hot water with mustard. During my absence (less than five minutes) her face had become very purple, and her breathing had failed so much that I feared to introduce the tube lest some possible pressure on the root of the tongue and epiglottis might extinguish life. A few acts of Sylvester's method of artificial respiration lessened her lividity, her mouth was forced open, and the tube passed; the stomach seemed empty. Some warm water

was pumped in and withdrawn; it returned tinged green, and Dr. M. thought it smelled of chloral. I was not familiar with the odour of this drug. The stomach was then washed until the water came back quite colourless and inodorous. During the few moments spent in doing this her breathing had again become very slow and with much rattle, and her face had again grown very dusky. I therefore withdrew the tube; we supplemented her failing respiration by Sylvester's method, and the colour of her face quickly improved, upon which I reintroduced the tube and injected into the stomach a cup of very strong coffee which had been meanwhile prepared, and threw another cup of it into the rectum. The radial pulse could now scarcely be felt, and natural respiration could only be maintained by supplementing it at short intervals by the Sylvester method. The case seemed hopeless. The soles were flicked with a wetted towel, and a Weiss's battery was held ready. We feared each moment would be the last. Within a very short time after injecting the coffee a slight improvement was observed in the pulse, and she began to breathe better; the improvement continued, the pupils were now less contracted, and at about 1.40—as nearly as I can judge, for we were too occupied to note the time at the moment—she slightly opened her eyes and spoke. Her first words were imperfectly articulated and unintelligible. At the end of another half hour she was breathing naturally, and was quite conscious. Our presence was no longer necessary, and we left her in charge of Dr. M., having learned that she was his patient. Her husband, who had been present during the greater part of this trying scene, said that his wife (whose mind had been ill-balanced since her confinement a few weeks before, and who had that morning been much distressed at parting from her mother and sister) had left him, as he thought, to go to the water-closet. Not returning in a reasonable time he grew anxious and went into the passage; his anxiety increasing, he tapped at the closet door and called to her. She made an unintelligible reply, which was immediately followed by a noise as of falling upon the floor and shuffling. Thoroughly alarmed, he burst open the door and found his wife senseless on the ground. It was within a few minutes of this that I first saw her. Subsequently Dr. M. ascertained that she had on that morning been in possession of ℥iv of the syrup of hydrate of chloral, the whole of which she had probably taken, as the

bottle was found empty. ʒi of this syrup is believed to con tain gr. x of hydral chlorate, which makes gr. 320 in ℥iv.

The lady has since become confirmedly insane.

XII.—*Case of Creeping Eruption.* By R. J. Lee, M.D. *Read November* 27, 1874.

MARY ANN T., æt. 3, was admitted into the Hospital for Sick Children on Oct. 22, 1874.

History.—The child had had scarlet fever two or three months previous to admission, from which she recovered, and the disease was not followed by dropsy, discharge from ears, or any of the sequlæ of scarlet fever. About three weeks before admission a red line was noticed by the mother just below the right ankle; this gradually travelled up the leg and thigh and on to the abdomen, meanwhile fading on the leg. There has been no pain, no itching, and the child has been well in other respects.

On Admission.—With the exception of a little stomatitis and being rather pale, the child seems well. The red line described by the mother cannot be seen, nor any vestige of it on the right leg, but it is still to be seen extending across the abdomen below the umbilicus. It is of a pale, rose-pink colour, about $\frac{1}{6}$ to $\frac{1}{8}$ of an inch in breadth; it presents several loops, and has at some places a stippled character, like a number of dots rather than a continuous line. Its limits are the two midaxillary lines. It is continuous on the right side with another line, which is of a pale brown tint, evidently of older standing. This pale brown line extends as far as the middle line, with a distance of about one inch from the forementioned red line, and running nearly parallel with it. There is nowhere any disquamation to be seen. Scrapings of the epidermis show nothing abnormal. The lymphatic glands in the groin seem quite natural. The skin elsewhere is healthy. Within the next fortnight the line travelled up the right side of the back, looping on itself repeatedly, as high as the middle of the scapula, but keeping to the right interscapular region. Then it came down and travelled across the front again above the umbilicus. It then travelled to the left back and across the lower dorsal spine for a small distance, then back towards the umbilicus and back to the spine again.

On Dec. 8 it was noted that the line had grown 4½ inches in 24 hours, and its anterior extremity was 1¼ inches below the right nipple.

Dec. 13.—The line has now once more crossed the spine from left to right, and has reached a point two inches external to the right nipple and in the same horizontal place. A piece of skin, including epidermis and derma—the size of a shilling—was snipped off, including the eruption at the above spot, and the margins brought together with fine silver wire.

On Jan. 21, 1875, there had been no further spread of the line, and all of it posterior to where the piece of skin was removed had faded almost entirely away.

Report on the Case of Creeping Eruption exhibited by Dr. R. J. Lee.

We have watched the eruption from day to day, and can bear witness to the general truth of the foregoing account. The line of redness generally progressed about an inch a day. Once it was found to have advanced as much as 4½ inches in the twenty-four hours. It crossed the median line of the back in its progress, a part of the body which could scarcely have been manipulated by the patient; and we have no hesitation in stating our conviction that the eruption was the result of disease, not, as has been suggested, of artifice.

The surface of the red line was repeatedly scraped, and the débris examined with the microscope, without the discovery of other than the natural constituents of skin.

Failing less trenchant measures, the child was placed under ether, and a small piece of skin, containing about half an inch of the line of eruption—chosen where the streak was very well defined at about an inch from its advancing end—was pinched up and cut out. It was noticed that immediately upon its removal the red line became invisible, nor could its position be recognised by any change in the appearance of the skin; all alike was smooth, pale, and apparently natural. The portion removed was hardened in chromic acid, measures being used to indicate the situation of the line, and examined microscopically, with the following results.

The position of the line was indicated in transverse section by three or four prominent papillæ, which were evident to the

naked eye, standing up from the otherwise straight edge of the sections. Opposite to these prominent papillæ the section was less transparent and browner than elsewhere, changes which the microscope showed to be due to injection of the vessels of the true skin. Thin sections, under a high power, displayed changes, the nature of which can scarcely as yet be considered as beyond question. We propose to do little more at present than to describe the appearances, with the aid of a drawing, leaving their significance to be determined by further observation. In the situation of the elongated papillæ a multitude of minute spheres or spheroids were

accumulated in the rete malphighii or deep epithelial layer of the skin. These were sharply outlined, nearly uniform in size, about $\frac{1}{2000}$th of an inch in diameter, and so closely resembled vegetable spores that it was only by careful comparison with other sections of skin and observations with reagents that it was inferred that such was not their nature. The Committee are indebted to Mr. Herbert Watney for bringing under their notice a section of presumably healthy negro's skin, in which precisely the same kind of globulation was to be seen, though less of it than in the specimen now in question. With the clue thus afforded further facts were made out, which appeared to show that the spheroids were produced by a transformation of the existing tissue rather than the introduction of any foreign organism.

Though most of the spheroids were apparently empty, like bubbles—strongly defined outlines without visible contents—there were a few in which a nucleus could be detected. This, in one or two instances, was central and

circular, like the nucleus of an epithelial cell. More often the nucleus was crescentic or flattened, and in contact with the circular outline, as if changed in shape and place by pressure. Besides these indications of the epithelial origin of the globules, it was found that they disappeared under the action of liquor potassæ as soon as the influence of this reagent had lasted long enough to partially dissolve the normal epithelial structure. It appeared probable that the appearance in question was produced by an increase, either by solid or fluid, in the outer or extra nuclear portion of the epithelial cell, distending the outline and displacing the nucleus. Without asserting that the change consisted of a cystic formation within the epithelial cell, such, to say the least, was suggested by the appearance presented. However produced, the globules had now the appearance of simple vacuities; their contents, if any, were invisible and insusceptible of colour. They were densely arranged in the rete malpighii, reaching in places from the surface of the true skin to that of the superficial scaly layer, immediately beneath which they were most numerous. Here they were in some places, especially about the elongated papillæ described, so closely set as to be in contact with each other, and to occupy some parts of the section, nearly to the exclusion of other structures. They were, as has been stated, about $\frac{1}{2000}$th of an inch in diameter—about the size, that is, of white blood-corpuscles. No fungoid threads or decidedly vegetable structure could be detected.

The Committee will not venture at present to express a more definite opinion as to the change which has been described, than that it probably indicated a morbid condition of the cutaneous epithelium in the line of the eruption.

To return to the patient. The wound made by the removal of the skin was closed by sutures, but these gave way, and the wound presently healed by way of granulation and suppuration. With the removal of the segment of the eruption the rest began to fade, and by the time the wound was healed no trace of it remained.

W. Howship Dickinson.
Tilbury Fox.
Dyce Duckworth.

XIII.—*Case of Tumour of Back, removed by Elastic Ligature.* By HENRY LEE. *Read November* 27, 1874.

THE patient, æt. 55, was admitted into St. George's Hospital on Oct. 28 last, with a large tumour on his back. This consisted of two parts, divided by an hour-glass contraction on a level with the skin. The outer portion projected for some inches in the shape and about the size of an ordinary cauliflower; the inner portion, more flattened, could be felt readily moveable beneath the skin. An elastic ligature was passed several times round the centre of the tumour, on a level with the skin, on the day following his admission, and tied. For half an hour after the operation the patient complained of pain, which was afterwards explained by the fact that a portion of the skin to which the tumour was attached had been included in the ligature. At the expiration of the fourth day the tumour was falling off, and the remaining portion of the pedicle was cut through with a pair of common scissors. The tumour had entirely sloughed, and there was not the slightest appearance of bleeding in the divided pedicle.

It was now seen that on one side the skin as well as the centre of the tumour had been divided by the ligature; on the other side the edge of the skin was affected by the cancerous growth. On Nov. 12 the remainder of the tumour was operated upon. An incision was made through the skin only, so as to separate the diseased margin; three large curved needles were then passed underneath the tumour, and the elastic ligature was again applied as before. Care was taken that every turn of the ligature passed into the incision made in the skin. The patient now complained of scarcely any pain after the operation. At the expiration of three days this part of the tumour was almost detached, and had completely sloughed. Its pedicle was divided with a pair of common scissors, without pain or hæmorrhage. The patient left the hospital with a healthy granulating wound on the 26th.

The two portions of the tumour thus removed, and which were shown at the Society, weighed 6½ ounces, and a considerable amount was lost in the discharge and small portions of slough which had come away. It is probable that the tumour, if removed entire, would have weighed double the amount.

The history of the case was not satisfactory; but, as far as could be gathered from the patient's confused account, the tumour had commenced about twelve months ago. Four months afterwards it began to ulcerate, and then grew very rapidly. Six months ago it was removed by ligature. This was tightened or reapplied five times, and caused him much pain. The tumour at that time came away in seven days, and weighed 10½ ounces. It, however, began to grow again in about a week. From this account it is probable that the projecting portion of the tumour alone had been removed, and that that which was below the skin had been left.

This tumour might no doubt have been easily removed with the knife, but I thought it a favourable case to demonstrate the action of the elastic ligature, which no doubt has its advantage in certain cases. In the first place it acts without any loss of blood; and this, in the case of a large nævus, for instance, is a great advantage; secondly, the elastic ligature remains tight until the tumour sloughs, or is in a great part detached; thirdly, patients will sometimes submit to an operation by ligature when they object to any cutting operation. A patient with a fistula in ano, for example, who dreads the knife, may have no objection to the operation by elastic ligature, and the operation may be perfectly well and speedily performed in this way.

In applying a ligature to a large tumour, or to a very vascular part, such as the tongue, it is of great importance that it should not get loose, which a common ligature would necessarily do so soon as some amount of ulceration had taken place, and some very awkward accidents have happened from this cause.

The elastic ligature which I use was procured for me by Mr. Blaise, not without some difficulty. He had, I believe, to send to Derby for it, as there was none to be procured in London.

The tubular elastic ligature has more recently been recommended, but this, in my opinion, is not nearly so good.

A tubular elastic ligature, as may be seen in the application of Esmarch's bandage, becomes flattened against the substance that it encloses, and a flat surface is that of all others which is the least calculated to cut. The object of the elastic ligature is to divide the parts which it encloses, and the thinner it is consistently with strength the more rapidly is the effect produced. I would not be understood to mean that the elastic ligature mechanically cuts through a part. Ulcer-

ation no doubt performs a great part of the process, and a dead pedicle may have to be removed by some other means. Yet mechanical pressure no doubt has a great deal to do with the operation, and the ulceration itself will go on rapidly in direct proportion to the degree of pressure made in one line.

The deeper part of the tumour might have been removed without dividing the skin at all. The elastic ligature may be guided by needles properly placed, so as to dissect its way between the skin and a subjacent tumour. But in this case, as the margin of the skin had been involved in the morbid growth, the line of action of the ligature was marked out by the division of a portion of the skin with the knife, and this rendered the subsequent action of the ligature comparatively painless.

XIV.—*A Case of Scrofulous Ulceration of the Bladder running an unusual course.* By Edwin Humby. *Communicated by* The President. *Read November* 27, 1874.

In November 1872 I was asked to see L. M., a little girl, æt. 9, who was suffering from irritability of the bladder, accompanied by pain in micturition. The urine was ammoniacal, and deposited large quantities of ropy mucus, but there was no blood in it. The general health was good, and there had been no loss of flesh.

Various remedies were prescribed, but with little or no benefit; and, thinking that there might be a stone in the bladder, a consultation was held with Mr. Prescott Hewett, who, being of opinion that the case was probably one of scrofulous disease of the bladder, advised cod-liver oil and perchloride of iron; and, if the child did not improve under this treatment, to sound for stone.

A fortnight after this the child had a rigor, accompanied by sickness and fever, which lasted for several weeks, during which time Dr. Hicks saw her frequently. At this period a swelling, with pain upon pressure, made its appearance at the lower part of the abdomen, between the pubes and umbilicus. To make sure that the bladder was emptied, a catheter was passed, and the operation was repeated night and morning for a week, but without any effect upon the swelling. No stone was detected. The swelling gradually increased,

and the skin covering it became tense, shiny and red, as if matter were forming. For this I again requested Mr. Prescott Hewett to see the child, but before we met a large quantity of matter was suddenly passed by the bowel, and the swelling, for the greater part, disappeared. Subsequently, the swelling varied much in size, in accordance with the amount of discharge from the bowel; and occasionally it was tympanitic, being filled with flatus. Matters went on thus for awhile, and then a small hole formed in the upper part of the swelling, at the umbilicus, and through this a watery fluid oozed, and continued to do so until the child's death.

At the post-mortem examination the bladder was found to be very much thickened, with extensive ulceration of its mucous membrane, and patches of tubercular deposit between it and the muscular coat. At two points this ulceration had perforated the coats of the bladder; one of these ulcerations, at the apex of the bladder, led into a circumscribed cavity in the peritoneum, from which a quantity of puriform fluid escaped when the abdomen was first opened; and into this cavity was also traced the opening at the umbilicus, through which fluid had oozed during life. The second perforation of the bladder was at the back of this organ, and through it an instrument was readily passed into the bowel, showing the course taken by the matter which had escaped by the anus.

The other organs were all healthy.

XV.—*A rare form of Skin Disease.* By W. Morrant Baker. *Read December* 11, 1874.

THE patient (exhibited to the Society), a male child, now twelve months old, was brought to me at St. Bartholomew's Hospital, in September last, with a very unusual disease of the skin.

The eruption, which has not materially altered since the child has been under my observation, is in the form, for the most part, of papules and tubercles of various sizes, from that of a pea to a kidney-bean; some nummular, some irregularly oval. In some parts, however, the eruption, as if by confluence of some of the tubercles, appears in the form of

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irregular wheals and patches, the largest of which measure from two to three inches in their longest diameter.

Raised above the general surface of the skin, about as much as a severe urticaria rash, the tubercles and patches are smooth and flattened; while as to consistence, they differ but little from the healthy skin—such difference as exists being expressed best by saying they feel somewhat tougher than healthy integument. They have, mostly, either a pale yellowish or yellowish-pink tinge; but the colour varies in different parts of the body from this to a decided pink or dull red, the variation depending apparently only on accidental variations in the degree of congestion of their blood-vessels. The pink and red spots can be made pale by pressure, the pale yellowish spots being by the same means but little altered.

The skin is in no part tender; and, so far as the child's mother can judge, the eruption itches but little, and only occasionally. She drew my attention however to the fact that when one of the tubercles happens to be rubbed or scratched, it appears for a time as if blistered or nettle-stung, this appearance subsiding in the course of an hour or two.

The eruption is most profuse on the back, rather less on the scalp, face and arms, and least on the legs. There is no sign of the eruption on the palms or soles, and none at the anus or its immediate neighbourhood. The mucous membrane of the mouth and the tongue are unaffected.

The eruption is said to have appeared first when the child was six weeks old, in the form of small red pimples on the back, which, gradually enlarging, were soon followed by the appearance of similar spots in other parts of the body, the face being affected last. During the last few months no fresh spots have appeared; and, although none have disappeared, they have grown at no greater rate, the mother thinks, than the child himself.

The child was born at the full time, and has been and is quite strong and well. The bowels are regular and the motions healthy. The urine is also healthy. He is still suckling, but the diet is not now confined to the mother's milk. He has not been vaccinated, and has not suffered from any special infantile disease.

The mother is quite healthy. She has one other child, a boy, four years old, who, with the exception of being rather 'delicate in the chest,' is quite healthy.

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The patient's father is said to be quite healthy. No relatives or neighbours are affected with any similar eruption.

Regarding the nature of the disease, I am in much doubt. For while in some of its characters it resembles one of the Erythemata, and especially the variety Urticaria, its persistence and freedom from active symptoms, local or general, seem to negative any such conclusion. But the difficulties seem greater still when an attempt is made to group it with any other class of diseases of the skin.

I had not been able to find a record of a case similar to this, until, on showing it to Dr. Tilbury Fox, he recognised the disease as identical with that of a patient who had been under his care at University College Hospital, and he informed me that he had seen two others. At the same time he agreed in believing such cases to be extremely rare, and that no account of the disease had been published. One of his cases, which he has been so good as to show me, he has promised to exhibit this evening to the members of the Society.

Note.—May 18, 1875. At the present time there is little or no change in the appearance of the eruption. The child is well-grown, and in every way strong and healthy. No fresh spots, the mother thinks, have appeared; nor have any disappeared.

XVI.—*On Xanthelasmoidea (an undescribed eruption).*

By Tilbury Fox, M.D. *Read December* 11, 1874.

THE diseased condition which is illustrated by the cases which Mr. Morrant Baker and I bring under the notice of the Society to-night, is a very interesting one, and has not, I believe, been described before; at least, I am not cognizant of any description of it.

I do not recollect to have seen—or at least to have recognised—this particular form of disease until about two-and-a-half years since, when I was asked by Dr. Gream to see it in a little baby, otherwise in a healthy state, and with the view of determining the nature of this peculiar kind of skin disease. I have recently seen the patient again with Dr. Brodie. In June last another instance of the affection was sent to me by Dr. Hebblethwaite from Yorkshire, and in this case a suspicion of syphilis forced itself upon the mind in consequence of the

particular features of the eruption which presented themselves.

I have seen a third case in my own practice, and it is the one which I exhibit to the Society to-night. As it is the most marked of the three, I propose to describe it first of all, and will then refer briefly to the others above mentioned, and subsequently offer a few general remarks upon the disease as exemplified in my three cases.

The following are the notes of the case brought under the notice of the Fellows of the Society by myself this evening.

Edward C., æt. 7 months, was brought to University College Hospital in May 1873, with a very peculiar rash.

The child was born at the full time, was very healthy in every way at its birth, and continued to thrive without any unusual circumstance occurring in connection with it, until it was six weeks old, when the eruption from which it is suffering began to appear.

The mother is a healthy-looking woman, has had two children before the one now in question; has never had any miscarriage, and only suffers from bilious attacks. Careful enquiry into her history fails to elicit any evidence whatever of her having been syphilized, or her being the subject of any syphilitic taint.

The eruption began, as stated above, to make its appearance in the child when it was six weeks old, and in the form of two places on the inner side of the left leg just above the knee. The places looked as though the child had been 'scalded' or 'scorched,' and the mother thought she had burnt the child. The next part of the body attacked was the neck and then the body, and at the present time the whole surface of the latter—including the scalp, soles of the feet, palms of the hands, and penis—is affected.

The spots vary in size from that of a small split pea to that of a shilling and more. The majority are about the size of a good pea; there are many in size and shape like unto an almond. When they first appear they are of a *dullish red colour*, or a *dusky copper colour*, but they gradually become paler, being after a time light buff-coloured. Some of them are occasionally very pearly looking. The patches or blotches are very numerous at the back of the neck, over the sides of the trunk, and in the temporal regions. They feel somewhat firm, like a thick piece of chamois leather. The spots are all elevated above the surface; the large ones almost, if not quite, a quarter of an inch.

On close inspection the patches present in some cases the aspect of an uniform infiltration, but most of them, however, are seen to be made up of a congeries of indistinctly marked smaller projections, which seem to be seated at the hair follicles. In the larger swellings the separateness of the projections seems lost in the close amalgamation, so to speak, of the individual projections. In fact in some places the appearance of the little patches might be likened simply to an hypertrophy of the skin involving specially the follicles of the skin, and of a buff colour.

The child presented a curious appearance, and was literally 'as spotted as a leopard,' only in place of discolorations there were these buff-coloured nodules or nodose infiltrations studding the white normal skin, interspersed with the dull reddish blotches, viz. the newest developed places. In some cases the nodules have shrivelled more or less, leaving a pale fawn-coloured slightly elevated flattened patch.

There are distinct infiltrations, of similar character to those on the skin, in the mucous membrane of the mouth and palate.

In every other respect the child appeared to be healthy, except in the occurrence of more or less itching, especially in the patches, in their early stage, and the tendency exhibited in them here and there to suppuration of solitary follicles. The child never exhibited the least symptom of jaundice or liver disorder, nor had the excretions or secretions been at all disordered.

During the last year and a half I have been carefully watching the progress of the disease in the child, and the changes which it has undergone have been slight, and consist in a gradual paling of the colour of the xanthematous patches. The child is still well and hearty, and suffers no inconvenience save some pruritus occasionally.

The case which I saw in consultation with Dr. Gream and Dr. Brodie was one of a much less marked character. The child was a baby boy, in whom the disease had commenced when he was about six weeks old; it was unaccompanied by constitutional symptoms, or cachexia, or liver disorder, or pruritus; and, in fact, was marked by purely negative symptoms and signs, if the eruption be left out of account. The patches were dull red at first, and retained the colour a long time, and are only now fading in hue. They seem, however, at the present time disposed to lose their dull colour and their elevation. They cause no discomfort, and

are only objectionable because they disfigure the face in parts. There was no syphilis in the parents, who are both healthy.

In the case which Dr. Hebblethwaite sent me there were some additional features of interest. The greater portion of the eruption made its appearance when the child was about ten days old, in various parts of the body, and resembled at first sight a syphilitic rash very closely. The patches were like those described in the first case; but certain of the patches on the head and on the back were present when the child was born. What helped to make the case look suspiciously like a syphilide was the fact that the child had slight occasional hoarseness, and it suffered continually from a cold. But on careful examination I rejected the idea that the disease was in any way syphilitic on account of the absence of any concomitant evidence of the syphilitic diathesis in parent or child, and the general characters of the eruption. Dr. Hebblethwaite informed me that the mother had been suffering for upwards of three years from an affection of the lungs, and she had suffered also from severe floodings before her last confinement with this child, which was born at the full time. The child had not suffered from any liver disturbance or disorder.

I have not thought it necessary to do more, in regard to the last two cases, than refer to their main features, since the disease in them corresponds exactly as regards characters to that in the child C—. It differed concerning the extent of the eruption, as there were only from 20 to 40 blotches scattered here and there about the body in these two cases.

Dr. Hebblethwaite informs me that under the influence of tonics and alteratives the patches in his case are gradually fading away.

I may perhaps add, that in one of the cases antisyphilitic treatment was fairly tried, and had not the least effect in improving the diseased condition of the skin.

Remarks.—I have been unable to obtain, for the purpose of determining the nature of the disease, any portions of the affected skin. Judging, however, by the aspect and feel of the patches of the disease, I cannot but conclude that the malady bears the closest resemblance to Xanthelasma or Vitiligoidea, and the Fellows of the Society will see how close is the resemblance in the case of the small patches about the penis, especially in the boy's case. In the fully developed disease there is clearly a deposit of buff-coloured stuff in the skin, and particularly about the hair follicles and

probably the sebaceous glands; but as to the cause of this deposit nothing can at present be made out. One thing is certain, that there is no evidence of any antecedent jaundice or liver disorder in these cases, and in so far they differ from many instances of Xanthelasma. There is another point in which these cases are exceptional if they be Xanthelasmatous, viz. in the fact of the disease occurring in young children, and as a congenital affection. Mr. Hutchinson, as the result of his observations, states that Xanthelasma never occurs in children. The disease in these children, supposing it to be Xanthelasma, is, moreover, peculiar in being at the outset acute and general, though it has lapsed into a chronic state.

It has been suggested to me that the disease is in reality a form of urticaria. To this view I demur entirely. The eruption of urticaria is essentially capricious and temporary in its appearance and duration; it is essentially an *hyperæmic* condition, with more or less effusion of serosity only; and it is not attended with the deposit of new material in the fibrous textures of the skin, as in these cases which I have brought under the notice of the Society.

The fact that the disease under notice is liable to be mistaken for syphilis from the fact of its occurring soon after birth, and evidencing itself at the outset by the development of dull red (copper-coloured) blotches, which may attack the feet and hands, give it special importance in a diagnostic point of view. It is very important, however, to recollect that the buff-coloured deposit may be found in the mucous membrane of the mouth and palate. The children attacked by the disease were not, so far as my cases show, the subjects of any such cachexia as occurs in conjunction with syphilis; there was no marasmus, no real snuffles, no mucous tubercles, and no multiformity of the rash, as in syphilitic disease. I may add that antisyphilitic treatment fails to influence the xanthelasmatous (?) disease.

I think, on the whole, that acute general xanthelasma would roughly describe the disease in my cases; but if it be thought that the disease is like, yet not the same as xanthelasma, I should be disposed to term it, tentatively, *Xanthelasmoidea.*

XVII.—*Popliteal Aneurism.* By James Rouse. *Read December* 11, 1874.

CHARLES May, æt. 42, a carpenter by trade, was admitted into St. George's Hospital, under my care, on Sept. 30, 1874.

The only family history to be obtained was that his grandfather died of cancer.

Previous History.—Twenty years ago he had syphilis; he has never met with any accident, and cannot remember to have ever strained his leg.

History.—Two years ago he noticed a small swelling in the popliteal space of the right leg, which was immoveable and non-pulsating. For six months the tumour gradually increased in size without any pain whatever. At the end of that time the part became stiff and painful, the pain being of an aching character; later on the pain became 'stabbing' and more intense. The tumour kept increasing in size, without any pulsation, until six months ago, when the patient noticed that the swelling throbbed. Two months before admission the leg began to swell and was also very painful, especially at night.

On Admission.—The right leg was semiflexed, very œdematous and tender to the touch. The popliteal space was entirely filled by a large immoveable pulsating tumour, with no lateral expansion and slight purring bruit, which was not synchronous with the pulse, but considerably behind it in point of time. The tumour passed upwards towards the thigh, and was more prominent on the outer than the inner side of the knee; in circumference it measured $20\frac{1}{2}$ inches. The skin over the tumour was tense and œdematous, and the veins throughout the thigh were much enlarged. The knee-joint was distended by effusion, and attempts at moving the joint or limb produced excessive pain. The femur seemed free from disease except in the immediate vicinity of the tumour, where it was apparently thickened.

There were a number of enlarged glands (round) in the groin of the affected side, and on examining the opposite groin glands of a similar kind, but fewer in number, could be felt. The patient was emaciated; he said he had lost three stone in weight during the previous two months. The skin was loose and flabby.

On the 31st, the day after admission, the bruit had entirely disappeared.

On Oct. 7 a consultation was held. The bruit, for the first time since Sept. 31, was distinctly heard. The effusion in the knee-joint had very considerably diminished, and the apparent thickening of the femur had quite disappeared. It was considered that the case was one of popliteal aneurism, and that treatment by ligature of the femoral artery should be adopted.

Oct. 8.—I tied the femoral artery in the usual position, a silk ligature being employed; pulsation immediately ceased in the tumour. The edges of the wound were brought together with silver wire.

9.—The leg and thigh were rather hot; there was no pulsation in the tumour.

10.—The tumour had diminished in size, measuring 20 inches in circumference.

14.—The tumour measured 19 inches. The incision had quite healed, except at the point where the ligature projected. The œdema of the foot and leg was less.

16.—Considerable pain was complained of along the course of the internal saphenous nerve, and there was slight increase in the size of the tumour.

19.—The circumference of the tumour was the same. A slough of the skin about the size of a florin appeared to be forming over the most prominent part of the sac.

22.—Pain in the limb had increased. The slough had began to separate. There was a slight discharge of blood clot, together with a small amount of sanious pus. The tumour measured 20 inches, which represented a considerable increase posteriorly, as the mass had become flatter at the sides.

From this time things went on tolerably satisfactorily until Nov. 5, when the slough separated, exposing layers of fibrin and blood clot—portions of which came away daily, mixed with pus. The œdema of the leg had increased.

Nov. 6.—There was much pain in the whole of the limb; more œdema of the foot; and there was discolouration of the outer side of the little toe.

7.—The little toe was decidedly gangrenous, and several black patches had appeared on the outer side of the foot, extending back to the heel.

8.—The mortification was extending, and the dorsum of the foot was blue and mottled. Great pain in the leg was complained of.

9.—The mortification was still extending. I therefore, after consultation with my colleagues, decided to amputate the thigh. The circular method was adopted, and the limb was removed above the tumour. The vessels were tied with carbolised catgut ligature, and the edges of the wound brought together with silver sutures. The stump was dressed with lint saturated with a solution of carbolic acid (1 in 40).

On examination of the limb after removal, the tumour was found to be the size of the fist; the tissues over it had sloughed, and exposed a mass of blood clot. The outer two-thirds of the clot was laminated, the central third soft and dark. The walls of the cyst enclosing this clot consisted of the inflamed and consolidated tissues of the limb, and the popliteal artery opened into it at its upper and inner part by an aperture just admitting the little finger. The artery above this point was natural, and so also were the anterior and posterior tibial arteries, which were given off from the artery just below the tumour. The popliteal vein was filled with an adherent coagulum, and so also was its internal branch for three inches of its course.

10.—He had passed a very fair night, and there was no fever.

14.—Up to this time all has gone on satisfactorily, although the patient had been very low and exhausted after the operation. With the exception of a small portion in the centre, the stump has healed by first intention.

19.—The end of the bone pressed against the skin, which looked red. In order to prevent projection of the bone or ulceration of the skin taking place, a weight was attached to the stump by means of strapping. From this date all went well, and the man is now convalescent.

The first point of interest in this case was the difficulty of diagnosis, for although there was a slight bruit on the day of admission, it was by no means the usual bruit of an aneurism. The pulsation was that general upheaving movement that is almost characteristic of pulsating tumour of bone. The history of cancerous disease in the family, the rapid wasting, the enlarged glands in the groin, the apparent increase in size of the femur, and the effusion into the knee-joint, gave the impression that the case might be one of malignant disease; but after a few days rest the apparent overlapping of the femur by the tumour having disappeared, the effusion into the knee-joint having been absorbed, and finally the return of well-marked bruit, rendered the diagnosis

of aneurism tolerably certain. That the diagnosis between aneurism of the popliteal artery and malignant disease of the lower end of the femur is not always easy, is well illustrated by the following case, which occurred a few years ago at St. George's Hospital.

W. B. came to the hospital on June 16, 1865, with the history that he had wrenched his leg fifteen weeks previously in lifting a heavy weight; this was followed by pain and swelling in the ham, which had increased up to the time of his admission. When admitted the right knee-joint was much enlarged, partially from effusion within the joint, partially from thickening around; the skin over it was white; the superficial veins enlarged. There was a large pulsating tumour filling up the popliteal space, and there was a distinct bruit. On compressing the femoral artery the tumour diminished; a double spring tourniquet was therefore applied over the femoral artery, and was kept on for seven days. At the end of that time the pain caused by the pressure was so great that the patient would not submit to it, and as the tumour had increased in size a ligature was applied to the femoral artery on June 30. Two days after the operation pulsation was detected in one part of the tumour, but there was no thrill. The patient went on well until July 10, when he had an attack of secondary hæmorrhage requiring an enlargement of the wound and ligature of both ends of the bleeding vessel. He was much collapsed, and continued in a very exhausted condition, having from time to time severe rigors, and died on the 18th.

On examination after death the tumour was found to consist of a large, irregular, soft encephaloid mass, growing from the back of the femur. The popliteal vessels were found to be raised up by the tumour and distinct from it.

There is also a preparation in the museum of St. George's Hospital, which is of interest in connection with my case. It shows an enormous aneurism of the popliteal artery, for which the limb was amputated by Mr. Keate. The sac is quite filled with hard fibrin and blood-clot, measuring 13 inches by 5½ inches. The patient was admitted into the hospital with gangrene of the toes owing to pressure on the vessels by the aneurismal sac. During life the tumour, which was quite firm and free from pulsation, was thought to be malignant; indeed so certain was the belief of the nature of the tumour, that the limb was injected.

The next point worthy of attention is the formation of a

slough in the skin over the sac of the aneurism. So far as I am aware, only one case in which this occurred has been recorded.

In the 'Gazette Hebdomadaire,' 1868, p. 139, a case under the care of M. Howel is reported. The patient, a male, æt. 40, was admitted into hospital with a popliteal aneurism. The tumour was of very large size, the skin over it was very tense; it was accompanied with much pain, and the limb was permanently fixed.

He was at first merely put to bed; but eight days afterwards the tumour suddenly enlarged considerably; there was acute pain. The skin turned blueish, and seemed about to slough. A movement was felt beneath the skin, which indicated that the sac was ruptured, and the blood had penetrated into the subcutaneous cellular tissue. Compression (digital) was commenced on Oct. 21, 1867; by this means the aneurism was cured by the 27th. The skin sloughed afterwards, exposing a red coagulum, which softened, separated, and left in view a second clot. This second clot also separated; but the coagulum which closed the mouth of the aneurism held its ground. The wound healed, and the patient quitted the hospital on Jan. 1, 1868, almost well, but with paralysis of the popliteal nerve.

The last point to which I wish to drawn attention is the gangrene and its cause.

The collateral circulation had been quite established, and I at first thought that the gangrene of the skin of the little toe might have been caused by pressure, as the foot rested on its outer side; but on the second day I felt convinced that it must be due to obstruction in the venous circulation by pressure of the inflamed and suppurating sac. I do not know of any case except the one I have just related in which this accident occurred.

XVIII.—*A Case of Syphilis, in which Secondary Disease exhibited itself twenty-three years after Primary Infection.* By Edgcombe Venning. *Read December* 11, 1874.

THE short notes of the case I am about to read may at first sight appear hardly worthy the attention of this Society; but there are one of two facts connected with it which appear to me to be of so special interest, in a diagnostic

point of view, that I have ventured to bring them under your notice this evening.

Trooper J. L., æt. 41, a very respectable intelligent man, has served twenty-three years in the 1st regiment of Life Guards. He is married, and his wife has had four children.

History.—Twenty-three years ago (that is just when he joined the regiment) he contracted an indurated chancre, for which he was admitted into hospital, and was under treatment for six weeks. During that period he was treated with mercury, and his gums were made sore. He never suffered from any eruption or sore throat afterwards. Eighteen years ago he contracted another chancre, which was of the suppurating variety, and was followed by a bubo, which suppurated, and he was under treatment for a month.

Up to September last he has enjoyed good health. His wife has always been perfectly healthy, and has four healthy children. She has never miscarried.

On Sept. 30 of the present year this man was admitted into hospital with a well-marked rupeal sore, situated on the upper and anterior part of the right leg, and a second on the back of the lower third of the same limb.

On examining his groin, I found both inguinal regions crammed with well-marked amygdaloid glands. He was put upon a course of iodide of potassium and sarsaparilla, the sores healed rapidly, and he was discharged to duty. Such are the brief notes of the case.

It would appear, then, that this patient contracted syphilis twenty-three years ago, and to all appearance was cured. The second chancre which I have noticed was of the local contagious variety, and therefore has nothing to do with our present consideration.

The point to which I especially wish to draw attention is the condition of the inguinal glands after a lapse of so long a period of time. I believe that these glands took on the form of what has been termed 'multiple indolent bubo,' and more recently by Mr. Henry Lee 'amygdaloid enlargement,' at the time the system became infected with syphilitic virus, twenty-three years ago.

The questions that presented themselves to my mind on seeing the case were the following :—

1. When these multiple buboes once form, do they ever disappear?

2. Is their presence indicative that the system is still contaminated with syphilitic virus?

3. Do they ever exist without syphilitic contamination?

If so, can they be distinguised from those depending on syphilitic poison?

In order to answer as far as possible these several questions, I have carefully examined the records of the men who are still in the regiment, and of whom I have notes showing that during the past eleven years (during which period I have been in the regiment) they have suffered from infecting chancres. I found in all forty-eight cases. Of this number, all excepting two had been under a continued course of mercurial treatment. Twenty-seven had taken blue pill in small but continual doses. Seventeen had been treated with calomel fumigation, two with inunction. The remaining two cases which I mentioned had been treated with iodide of potassium only.

In addition to examining the records, I have examined each case personally; and, with one exception, I have found in all well-marked amygdaloid enlargement of the inguinal glands, either in one or in both groins. They existed in both inguinal regions in thirty-four cases, and in one region only in thirteen cases. Out of this number we have records of secondary syphilitic affections in twenty-seven of the patients. In the remainder, I presume, either that the secondary manifestations were so slight that they were not observed by the patient—which I believe to be the most likely explanation—or else, perhaps, some few of them may have escaped this condition altogether.

And now with regard to my first question—viz. when these multiple buboes have once formed, do they ever disappear? I can answer this in the affirmative, so far as to say that in some few cases these glands do disappear altogether, as you will remember that I mentioned that there was one exception in my cases. In this patient the glands, which had previously been enlarged, had quite resumed their normal condition. My impression is that the system is then quit of the disease, and under such a condition reinfection may take place; and I am the more confirmed in the belief after listening to the scientific and interesting paper which Mr. Gascoyen communicated to the Royal Medical Chirurgical Society last month.

As to whether the presence of these amygdaloid glands is indicative that the system is still contaminated with the syphilitic virus, I would answer that I believe they are, providing that they be persistent. I believe them to be, then, a sure diagnostic symptom. For many years I have made this point one of careful observation, both in the wards of St. George's

Hospital and also in my own regimental hospital; and I cannot call to mind a single case in which, when there were evidences of syphilitic taint shown by the presence of the different forms of syphilides, nodes or gummy tumour, in which there was not at the time an amygdaloid condition of the glands present, and I have seen the nature of many a doubtful tumour correctly diagnosed by the presence of these glands.

I should be glad to hear from those gentlemen who have made the subject of reinfection a study, if they can tell me, what was the condition of the inguinal glands just prior to the supposed reinfection. It has fallen to my lot to see two cases in private which might easily have been mistaken for reinfection had not the condition of the inguinal glands been ascertained. Some years ago I treated these two cases for infecting chancres with mercury; both had slight secondary disease, but ultimately appeared to get quite well. The glands still remained enlarged. Since that time both these patients returned to me with well-marked indurated chancres, and I am indebted to our President for having pointed out to me the real nature of the first case, as I was in great doubt about it. Calomel fumigation locally applied cured both, and they have remained well up to the present time. I am unable, from my own observation, to answer my third question—viz. do these glands ever exist without syphilitic contamination? I have heard of their doing so after severe exercise, such as rowing, &c.; but then, as far as I am able to ascertain, they were not persistent, which is a condition I claim for syphilitic glands.

The sum total of what I have stated resolves itself into this. Are these amygdaloid glands, when present, of value as an aid in diagnosis, or are they worthless as such, and therefore to be set aside altogether? This is the point on which I am anxious to have the opinion of the Society. My own observation leads me to the belief that in them we have a very sure and certain aid in diagnosis, and one which if more looked for would supply the key for the solution of many a difficult problem.

XIX.—*A Case of Subcutaneous Urethrotomy.* By W. F. Teevan. *Read January* 8, 1875.

THOMAS G., æt. 31, a pale delicate-looking groom, residing at Camden Mews East, Camden Town, was admitted into St. Peter's Hospital on Oct. 3, 1874, suffering

from continually recurring attacks of retention of urine, caused by an organic stricture of the urethra.

History.—Nine years ago the patient caught his first and only attack of gonorrhœa, for which he did nothing beyond taking some capsules. The discharge degenerated into a gleet, which never left him. Some time afterwards (he could not fix the date) he began to be troubled with frequent micturition, accompanied by a dwindling stream. In 1868 an abscess formed in his perineum, which necessitated his entering Charing Cross Hospital. He stated that an incision was made into his perineum, and a metal catheter passed into the bladder, and retained there for two days, when it was replaced by a soft instrument, which was kept in for five days. According to his account, he recovered with a fistula, and left the hospital.

When in Scotland, in October 1871, he was attacked with retention, and had to call in a surgeon, who could not pass an instrument, but he got relief by the urine dribbling away night and day for seventy-two hours. In the next month he sought my services at St. Peter's Hospital. By gradual dilatation with soft French instruments I dilated his urethra up to No. 14 of the French guage, when the fistula completely closed. I then taught him how to pass a bougie, and lost sight of him for three years. When the patient was admitted, in October 1874, he stated that for the past three years he had not gone for a longer period than three days without an attack of retention, and that he had often to use the bougie six times a day. On the average, he had to pass the instrument, which was about equal to a No. 4, English size, twice a day. I tried various plans of treatment, but they all completely failed to afford any permanent relief, and I could not dilate the urethra beyond No. 14 of the French guage, as the passage of an instrument of larger calibre made the patient worse, and caused rapid re-contraction, from the great irritation set up. The stricture was situated in the centre of the perineum, four and a half inches from the meatus externus, and was three-quarters of an inch long. The limits of the stricture could be clearly defined externally by the finger, when an instrument was in the canal, and the affected portion of the urethra felt as if encircled by an iron hoop.

The bladder was clearly not at fault, for the passage of a bougie always enabled the patient to urinate immediately the instrument was withdrawn. But whether a bougie or

catheter were used, the result was always similar, each attack being followed by another one.

Being unable to effect any material improvement in the patient's condition, and the process of dilatation having come to a dead lock, I determined to operate, the patient being very anxious to be freed from his continually recurring attacks of retention.

On Nov. 16, at 3 P.M., I subcutaneously divided the stricture on a catheter staff, having a sliding catheter attached. There were present at the operation Dr. Porter and Dr. Bangs (of New York), Dr. Lovejoy (of Boston), Dr. Hubbard (of Ohio), Dr. Van Derveer (of Albany), &c. Although no anæsthetic was administered, no expression of pain escaped the patient's lips, and not more than a teaspoonful of blood was lost. The sliding catheter was passed over the catheter staff into the bladder, and retained *in situ*. A pad was placed over the puncture, and 10 grains of quinine were given. The next day, at 2 P.M., the patient had a rigor, and when I visited him three hours afterwards I removed the catheter, as the occurrence of the rigor had demonstrated the inutility of the presence of the instrument. The 10-grain dose of quinine was, however, repeated. The following day, at 4 P.M., another rigor occurred. The quinine was again repeated. At 2 A.M. the following morning the patient had a slight shivering fit. No more quinine was taken. On the fifth day after the operation the patient was examined by Dr. Lovejoy, Dr. Porter, and Dr. Bangs, as they were about to return to America. Neither they nor I could discover any trace of the puncture made in the perineum, and in their presence I passed a full-sized elastic catheter into the bladder with ease. The after-treatment consisted in passing a No. 20 soft ordinary catheter every third day. On Dec. 3 the patient left the hospital quite well. The operation was completely successful in curing the patient of his continually recurring attacks of retention. With the exception of the periods when there were rigors, the temperature never rose beyond 99°, and the pulse never exceeded 80.

Remarks.—I have stated the facts which, in my opinion, rendered an operation necessary. Why did I choose this particular kind of operation? From the French surgeons I had learned what it was that was wanted in this case—namely, the '*pièce d'allongement*,' or the 'cicatricial splice' of Professor Gouley. The stricture required to be completely divided, and then its ends to be reunited by a cicatrix that

should be soft, supple, and endowed with the minimum amount of contraction. Subcutaneous urethrotomy offered all that was wanted. If I had split the patient's stricture he would either have lost his life or recovered with a cicatrix endowed with the maximum amount of contraction. I should have regarded external urethrotomy as a severe procedure in this case, for there was neither abscess nor fistula in the perineum to justify its performance. Some surgeons would probably have preferred internal urethrotomy in this instance, but I resorted to subcutaneous urethrotomy, as I knew I could ensure a complete division of the whole of the tissues between the skin and the staff, whilst the blade of the urethrotome would only have cut a channel sufficiently large to allow itself to pass through.

Contrary to my own opinion, I tied in a catheter, and gave the patient large doses of quinine.

I suspected that this patient would have rigors after the operation, because he had shiverings from time to time after the introduction of a bougie, and I left an instrument in to show that the catheter could not prevent the occurrence of rigors. If I had not left in an instrument, some surgeons might have said that the rigors were caused by the non-retention of a catheter. I am now enabled to say that not only did the catheter not prevent rigors, but it actually determined their occurrence, for in my other operations I left in no catheter, and had no rigors, save in two instances. My opinion of quinine is that it is of no use in these cases.*

XX.—*A Case of Naso-pharyngeal Polypus.* By T. Holmes. *Read January* 8, 1875.

THE following case, though in no respect peculiar, is, I think, of sufficient clinical interest to occupy the attention of the Society.

The patient, Amos S., now æt. 35, was originally admitted into St. George's Hospital on May 30, 1866. He had been discharged from the army in consequence of epistaxis—which was attributed, in the certificate of his discharge, to disease of the heart—after having laboured

* I saw the patient on July 5th, and he informed me that he was perfectly well in all respects, never having had an attack of retention since the operation, now nearly eight months ago. He passes a catheter once a month.

under it for about six months. He was then admitted into a metropolitan hospital, under the care of one of the physicians; but as the source of the hæmorrhage was not discovered, he obtained no benefit. When he came under my care, however, the tumour had grown into the left nostril so as to be perceptible to himself, and there was no longer any question about the nature of the affection. The polypus could be seen both from the mouth and nose. It bled freely when touched. The man was excessively exsanguine, the complexion being quite waxy; he was dull and heavy, and passed almost the whole of his time asleep, being generally awoke by a sudden burst of hæmorrhage. He lost blood pretty copiously every day. The polypus was removed on June 7, by taking away all the upper jaw, except its orbital plate. This gave moderately free access to the base of the skull, from which (*i.e.* from the body of the sphenoid or basilar portion of the occipital) the tumour grew. It was removed without much hæmorrhage, and the bone exposed. This appeared healthy, and nothing further was done. The man bore the operation with great fortitude, no anæsthetic being administered. The wound healed very kindly, leaving only slight external deformity. The hole in the hard palate was filled up with an obturator. He suffered no more from hæmorrhage, and soon returned to work.

He remained free from hæmorrhage and in perfect health for about a year. Then slight bleeding at the nose returned, but did not become troublesome till two years ago, *i.e.* six years after the operation, when he was laid up for fifteen or sixteen weeks with severe epistaxis. This being looked upon as proceeding from some malignant disease by the gentleman who then saw him, was not made the subject of any definite treatment, and the epistaxis has persisted more or less ever since, until his re-admission. When admitted he was in so weak a state that he was kept for some time in the hospital, in order to be fed up. The hæmorrhage was at first in abeyance, but after a week or two it became so troublesome that it was necessary to do something to stop it. The left nostril was seen to be more expanded than before, at the top, but still not to any great extent. On removing the obturator, which he had worn since the last operation, the growth could easily be felt through the hole in the hard palate, and it bled freely when handled. He could breathe through that nostril and swallowed perfectly, nor did the tumour project below the palate.

On Dec. 3, 1874, the growth was removed by laying open the old wound in the greater part of its extent. As before, no anæsthetic was given. The tumour was much softer than before and more deeply lobulated, consisting indeed of three or four almost separate portions, all however appearing to spring from a common base in the same situation as before. Considerable hæmorrhage followed the removal of the more superficial part of the growth, so that it was necessary to lay the patient flat on the floor in order to avoid syncope. When he had rallied, all the growth which could be felt was carefully rasped off the skull, and pieces of blue lint (lint steeped in a saturated solution of sulphate of copper) were pushed up against the place of attachment of the tumour. This lint maintained its position for four or five days, and then dropped into the mouth with a little suppuration.

The wound healed very kindly. He was out of bed in three days, and was walking out on the seventh day. With the exception of a little oozing for an hour or two after the operation, there has been no bleeding since.

The parts removed in the first operation are preserved in the hospital Museum, and have been again carefully examined. The polypus consists chiefly of fibrous tissue, intermixed with which are oval and elongated (spindle-shaped) cells, but these are not very abundant. The recurrent growth closely resembles the first tumour, but contains more cells in proportion to its fibrous element, and, besides the fusiform, there are some round cells.

Mr. Haward has been so kind as to prepare a microscopic section of each of these tumours.

The progress of this case shows, I think, the convenience of removing the greater part of the upper jaw for the treatment of naso-pharyngeal polypus. In the case before us I do not see how the tumour could have been dealt with otherwise. The nostril was not sufficiently dilated to allow of the tumour being attacked either by turning up the wall of the nostril or by conveying a snare round the root of the tumour through the nose; nor could the attachment of the polypus have been reached by dividing the soft and hard palate, as Nélaton has recommended. There remained only to penetrate to the base of the skull by piercing the upper jaw; and of all the ways which have been devised of doing this, I think that of removing the bone entirely, leaving the orbital process for the sake of appearance, is both the most convenient in itself, and offers the most easy way of attacking the tumour again,

if it should sprout up afresh. In this case the deformity which was left by the operation was very trifling indeed, and the removal of the renewed growth was at once effected by the reopening of the scar, without any risk or much increase of the deformity. The performance of this operation is much facilitated by the absence of anæsthesia, though when the patient has not the resolution and nerve which my patient possessed in an eminent degree, there is no absolute contra-indication to anæsthesia.

XXI.—*A Case of Hæmoptysis in a Syphilitic Patient.* By Robert Farquharson, M.D. *Read January* 9, 1875.

PRIVATE G. T., æt. 21, service two years, was admitted into the regimental hospital of the Coldstream Guards on Aug. 10, 1874, under the care of Surgeon-Major Trotter. He is naturally a strong, well-developed man, a gardener by trade, 5 feet 7 inches in height, measures 37 inches round the chest, and has never previously suffered from severe illness, nor can any hereditary predisposition to pulmonary disease he made out. Last April he came under treatment for constitutional syphilis, the symptoms consisting of condylomata around the anal orifice, and mucous papules on the tonsils. No history, however, could be obtained of earlier secondary manifestations, nor any clear account of the nature or treatment of the primary sore, from which he appears to have suffered prior to enlistment, the cicatrix being readily detected on the body of the penis. He remained in hospital at this time for sixteen days, and left quite well, after a mild mercurial course.

Towards the end of July he first began to feel breathless on exertion, and to experience much annoyance from a very sharp and frequent cough, with scanty expectoration. He did not take much notice of this, however, until the tenaceous mucus which followed each act of coughing assumed a reddish tinge; and when the blood began to increase gradually in quantity, he took serious alarm, and at once reported himself sick. He was taken into hospital, and a careful examination of his chest was made, but nothing abnormal could be detected, the lungs expanding fully and equally on either side, the percussion note being clear and good, and

the respiratory murmur unimpaired. There was no trace of constitutional disturbance, nor had he lost flesh; but his face wore rather an anxious expression, and his complexion had much of the sallow earthy hue suggestive of the syphilitic cachexia.

He was ordered to be kept quiet in bed, to have half diet, with half-a-pint of porter per diem, and the following medicine twice a day: — ℞. potassii iodidi, gr. xii; liq. hydrag. perch. ʒi; decoc. sarzæ. ℥ ii.

On Aug. 11 it was noted 'that there is no change in his symptoms; the pulse and respiration are quiet, and the temperature normal. Has coughed very frequently, both by day and night, and expectorated about one-sixth of an ordinary spit-cup full of mucus intimately mixed with blood.'

Two days later I had the opportunity of seeing the case with Mr. Trotter. We then made a minute exploration of both heart and lungs, with entirely negative result, and were also quite unable to detect the slightest indication of constitutional disturbance. The cough, however, continues; it is hard, frequent, irritating, and invariably attended by the expulsion of sputa presenting the following characters:— Firm and tenaceous mucus adhering to the bottom of the vessel, dark red in colour, perfectly homogeneous, and unmixed either with pure blood, pus, or anything like exudation, or fibrinous deposit, having a faint and rather disagreeable smell, and resembling somewhat the prune-juice expectoration of advanced pneumonia. The quantity brought up continued much the same as before, *i.e.* from one-sixteenth to one-quarter of an ordinary spit-cup per diem.

The case continued to pursue its course apparently unchecked until the eighth day, when both cough and expectoration began to diminish, and on the twelfth both had entirely ceased. The patient was kept in hospital some little time longer as a matter of precaution, and on the date of his discharge, nineteen days after admission, I again examined him, and found a marked improvement in general health, his colour being clearer and his weight increased by three pounds.

I may add that he has since performed, without inconvenience, all the trying duties of a soldier, and now looks strong and well.

Remarks.—Did this case stand entirely by itself, I might have had some hesitation in bringing it before the Society,

and in attempting to add another to the long list of symptoms for which constitutional syphilis is held responsible.

But being one of a series which my friend and former colleague, Mr. Trotter, has followed out during a varied experience of military practice, and having not only had the advantage of studying it with him, but having been most kindly given full permission to use it any way, I venture to place the leading facts on record, as a basis for discussion. The other cases to which I refer presented much the same change of phenomena, *i.e.*—

1. A well-marked syphilitic history.

2. A hard, frequent, irritable cough, with the peculiar muco-sanious sputa just described.

3. Total absence of constitutional symptoms or physical signs.

4. As a rule, perfect recovery under a tonic and anti-syphilitic treatment. In the greater proportion this cure was permanent, but in one or two instances well-marked phthisis eventually followed, and these appear to have been the cases of earlier date, in which the treatment was conducted on what may be called general principles. Since the specific nature of the symptoms has been recognised, an almost uniform success has attended the use of special remedies; and although it is yet too early to assume absolutely that this man is free from further danger, I think I am justified in believing that he is quite relieved from the evil consequences depending on this particular outbreak of syphilis.

On referring to the literature of the subject, I am unable to find any case precisely bearing on this.

The records of pulmonary syphilitic disease are almost entirely pathological, and through the labours of modern observers we have become familiar with the fact that the lungs, in common with other internal organs, may be infiltrated with an ill-developed form of fibro-plastic or albuminoid material. The subsequent fatty degeneration and breaking down of these deposits may give rise to all the symptoms of advanced phthisis, and neither clinically, nor on the post-mortem table, can such cases readily be distinguished from others which depend on very different antecedent conditions.

We may again have instances in which the syphilitic cachexia *per se* may closely simulate, in all but its physical signs, consumption; and cases have been met with, com-

paratively early in the course of constitutional venereal infection, in which profuse hæmoptysis has been the first stage of lung mischief.

Syphilitic bronchitis has also been described by Drs. Wilson-Fox, Walsh, and others; and syphilitic phthisis has been admitted by Dr. Southey among the varieties on which he founded his Lectures at St. Bartholomew's Hospital; but I venture to think that early clinical records of the mode in which this insidious poison affects the respiratory organs are but too rarely met with. The case I have just read seems to be one in which we may fairly trace the connection between cause and effect, as indicated by a syphilitic history in a previously healthy subject, and a gradual development of pulmonary irritation, unattended by inflammation; and the question now comes to be, what was the precise nature of the pathological process?

Now I think we may place gummata out of the question, or at all events look upon their occurrence here as very improbable. There was no evidence, either constitutional or otherwise, that the syphilitic process had reached its tertiary stage, and the patient's rapid recovery lends colour to the belief that his symptoms really depended on something of an earlier and more superficial nature. We may, perhaps, assume that an exudation similar in character to the condylomata, which are so common on other mucous surfaces, may have been deposited in the minuter bronchial tubes or ultimate pulmonary tissue. That this must have been both limited in extent and deep-seated was rendered probable by the fact that no physical signs were at any time observed, although, on the other hand, the patient possessed one of those ample chests in which the quantity of unused lung and residual air is unusually great, and in which a slight physical sign may readily pass unobserved. It was clear, however, that no inflammatory condition was present, but that the blood, slowly poured from capillaries obstructed by neighbouring deposit, remained for some time in the ultimate tubules or air-vesicles, as shown by its very dark colour on expulsion. This prolonged contact with the pulmonary tissue naturally brought about a high degree of irritation, and afforded a ready explanation of the peculiarly hard and frequent cough which caused so much distress; and herein, no doubt, lay the true danger of the case, for although the patient's condition whilst in hospital could hardly be looked upon as actually serious, I am strongly of opinion that he

stood on the brink of peril. Bleeding from the lung, when not accidental, or the result of nature to relieve inflammatory conditions, must always be looked upon with suspicion; and had this man been treated in a conventional way, by astringents and other temporary expedients, it seems probable that the foundation would have been laid of destructive pulmonary disease. The unchecked irritation must eventually have led to some of those complicated pathological changes which constitute phthisis in its various forms, whilst, on the other hand, the removal of the suspected cause gave the satisfactory result of a restoration to perfect health.

XXII.—*Case of Periostitis of the Humerus, relieved by Free Incision.* By Prescott Hewett. *Read January 22, 1875.*

THE patient, a railway porter, æt. 46, had usually enjoyed good health. When young, he had a chancre, but this had never been followed by secondary symptoms in any form; and when examined, the groins were found to be free from enlarged glands. He had never met with any accident, or blow on the arm. Some years back, he began, for the first time, to suffer from pain in the right arm, but thinking it was rheumatism he did not attach much importance to it; he had not, however, suffered from rheumatism in any other part. About six years ago this pain in the arm became intense, especially at night; and after awhile a swelling gradually made its appearance on the outer side of the middle of the arm. And thus matters had been going on for two years when the patient first came under observation. The swelling was then of the size of a man's fist; it was remarkably hard, nodulated on its surface, but upon the whole pear-shaped, with the point downwards, and strictly limited to the insertion of the deltoid, where it was firmly connected with the bone, which at this point was somewhat increased in size and roughened. There were no enlarged glands in the axilla, and no swelling in any other part of the body. The countenance was depressed and careworn; the whole aspect was that of intense and long-continued suffering, and of late the patient had been losing flesh somewhat rapidly.

Thirty grains of iodide of potassium were ordered three times a day, the only effect being that of mitigation of the

pain for a time, which afterwards returned with greater severity. After a fair trial, there being no decided relief from this plan of treatment, the man was admitted into St. George's Hospital, and it was decided, in consultation, that a free incision should be made through the tumour down to the bone. This was done under chloroform, and the whole mass, including the periosteum, was cut through. The tumour itself, 3 inches in length, and 2½ inches in depth, was remarkably hard; so much so, that the knife, a large and strong one, was blunted; the whole of its section presented the appearance of the densest fibro-cartilage. The wound was stuffed with lint, and covered with a large poultice.

The operation was successful; the intense pain soon subsided altogether; free suppuration followed in due time; the tumour gradually disappeared, and in a few weeks the wound was healed, leaving the bone underneath somewhat thickened and irregular on its surface.

The patient was presented to the Society about four years after the operation. He was then quite restored to his usual good health; his countenance had lost all traces of anxiety, and he was as heavy as he had ever been. And save thickening and roughness at the seat of the incision, the bone was free from disease. But there was partial ankylosis of the elbow and shoulder-joints, notwithstanding which, however, the patient had, shortly after he left the hospital, been able to follow his usual employment, that of a railway porter, and he could lift as much as a hundredweight.

As to the diagnosis in this case, Mr. Prescott Hewett had been mainly led to the inference of the tumour being periosteal by its strict limitation to the insertion of the deltoid, the corresponding part of the bone being somewhat thickened. And as to the origin of this tumour, that was most probably due to some wrench of the muscle, a kind of injury so common in the patient's employment that it was seldom heeded, and therefore likely to pass unnoticed. There had never been any severe blow at the spot; there was nothing to lead to the supposition that it was due to a rheumatic affection; and notwithstanding the existence of a sore on the penis in former years, as there had never been any secondary symptoms, and as there were no enlarged glands in the groins, its origin could not be referred to syphilis.

XXIII.—*Subperiosteal Excision of Os Calcis.* By T. Holmes. *Read January* 22, 1875.

THE interesting experimental researches and works of M. Ollier on the importance of preserving the periosteum in excisions, have no doubt made much impression on the surgical members of this Society, yet I cannot discover that much has been done in London to obtain practical experience of the subperiosteal method which M. Ollier recommends. I published some years ago a case of excision of the elbow performed subperiosteally ('The Practitioner,' Feb. 1869), and Mr. Stokes, of Dublin,* has had more extended experience of this method of excising the elbow-joint; but the result of these cases has not been such as to make me desirous of repeating the operation on the elbow, neither my results nor Mr. Stokes's being equal to those obtained by the ordinary operation. In vol. vi. p. 174, of the 'Transactions' of this Society, an interesting account is to be found, by Mr. Croft, of a case of excision of the hip, performed on a plan recommended by Dr. Sayre, of New York, for excising the great trochanter along with the head and neck of the bone, preserving the periosteum and muscular attachments over the portion of bone removed. The objection that would occur to this method is that an unnecessary amount of bone is removed on the chance that it may be regenerated.† I have never found an opportunity to practise the subperiosteal method on the shoulder, which seems more appropriate than any other joint for it; nor till a few months since had I found an appropriate case for the subperiosteal excision of the os calcis. The result I show to the Society to-night; and

* *Dublin Quarterly Journal*, 1865, 1868.

† The advantages claimed for Dr. Sayre's method is that less shortening follows it than is usual after the ordinary resection. This is *à priori* hardly intelligible, since in the ordinary excision of the hip little, if any, bone covered by periosteum is usually removed. The surgeon begins by exposing the bone from above, where it is normally covered by cartilage, and if he removes any of the bone which lies external to the normal joint, and therefore is normally covered by periosteum, the latter is usually separated from it by disease, so that if the bone be examined after removal, no distinct periosteum will be found on it. To commence from below and remove the whole trochanter certainly seems a needless complication. [In the debate which ensued on this paper Mr. Barwell mentioned that Dr. Sayre, when in England, excised the hip by his desire on a patient in Charing Cross Hospital who was under his care, and that the shortening was quite as great as usual, though the operation was performed after the subperiosteal method.]

here again I regret to say that it is inferior to that obtained by the common method. The patient, a boy æt. 14, had been long under my care at St. George's Hospital, and I had endeavoured to avoid any surgical operation by patience, and then by the persevering use of the potassa c. calce. But after nearly a year of this treatment, as the disease remained as bad as ever, and the patient was quite crippled, both he and I were tired of waiting, and I determined to remove the bone. I mention this because some surgeons seem to think that the excision of the os calcis is a superfluous operation, and that all cases will recover with patience.

On Jan. 31 of last year I performed the subperiosteal excision of the entire bone, following strictly M. Ollier's directions. In a few words the steps of the operation are as follows: An angular flap is made by an incision along the outer and lower border of the os calcis and running up along the outer border of the tendo Achillis. The incision having been carefully carried to the bone, the periosteum and the tendons of the Peronei muscles are raised, and the external face of the bone denuded; then the lower surface and the tuberosity are denuded of periosteum, the tendo Achillis being detached along with the periosteum. Next the joints are opened, and then the bone being twisted outwards, the surgeon cleans the inner face of it from periosteum as well as he can. I had the benefit of the assistance of a surgeon of great promise, whose premature death soon afterwards deprived many of us of a friend—M. Muron, who had assisted M. Ollier in some of his operations—and he told me that the bone was as perfectly denuded as is commonly found to be possible. I found no difficulty in detaching the periosteum from the outer, the posterior, and the greater part of the lower surface of the bone; and those portions, on examination, were found perfectly bare, but on the inner side and adjacent lower surface some strips of periosteum were left on the bone. Unluckily the bone, by some misunderstanding, was not placed in the Museum. The elastic bandage was employed to empty the parts of blood. The bone was diseased throughout, and in some parts deeply ulcerated. Much inflammation followed the operation, and the temperature did not subside to the normal for nearly a fortnight; but no distinctly bad symptom occurred. There remained, however, for a long while, a great amount of indolent swelling in the foot, and the boy has hardly yet recovered the power of bearing weight on it. The ankle-joint is to a great extent, if not completely, anky-

losed, so that he cannot point the foot at all, and he walks in an awkward stumping manner. Otherwise the parts are now sound, and he will have a moderately useful limb, though certainly not so good a one as I have often seen after the common excision. The other day I saw a boy of about the same age, in whom I had removed the os calcis, in private, a few months before this operation. His walk is far better, and he can flex and extend the foot quite as well as in the natural state, and will, I have no doubt, ultimately acquire the power of hopping and leaping, as I have often seen after the removal of the calcaneum by the common method. My present patient, I fear, will never do so.

The objects of the subperiosteal method are, it must be recollected, two. The first, and more important, is perhaps the regeneration of bone from the detached periosteum. This has certainly failed in the case before us, for I have passed needles through the cicatrix until I touched the astragalus, without feeling any bone. And I suspect that the extra amount of violence necessarily used in this subperiosteal method, often sets up a degree of inflammation which, together with the mechanical injury done to the detached membrane, causes it to slough. The second object of M. Ollier's proceeding is, however, hardly less important in some situations: viz. to preserve the tendons and other contiguous structures from any damage by operating inside of the periosteum to which they are attached or which they touch. It is believed by M. Ollier that the detached tendons acquire a much firmer and more useful attachment to the regenerated bone than they would to the cicatrix or neighbouring parts if cut away as is commonly done. The only tendons which are divided in the common excision of the os calcis are the peronei and the tendo Achillis. I never could trace any loss of function as due to the division of the former tendons, and certainly the tendo Achillis, whatever its exact attachment may be (as to which I have no anatomical evidence, though I believe it is prolonged by cicatricial tissue into the astragalus), generally acts most freely in pointing the foot, while in this case it has hardly any action whatever.

I am sorry to speak in this somewhat depreciatory tone of M. Ollier's proposal, which seemed to me an eminently reasonable one, and to which I have endeavoured to give a fair trial, but I must confess that I fear its practical difficulties outweigh its theoretical advantages.

XXIV.—*Case of Optic Neuritis, with complete Loss of Vision. Recovery under Treatment.* By John C. Thorowgood, M.D. *Read January* 22, 1875.

Kate G., æt. 12, was admitted into the West London Hospital, at Hammersmith, Oct. 23, 1873.

The history, taken by Mr. Blackmore, the clinical clerk, was as follows:—

Five weeks ago patient had a pain at the lower part of her back, from a blow against a desk. She used some liniment, and the pain went away.

Shortly afterwards a pain came at the back of her neck, with tenderness over the cervical spine, slight tumidity, and muscular stiffness. She applied at the hospital, and saw Dr. Thorowgood, who gave her an ointment made of equal parts of unguentum hydrargyri and unguentum belladonnæ, which she used, and in a few days this pain also went away.

One week after this, about Oct. 17, she fancied there was a fog before her left eye, which gradually got worse till Oct. 19, when the sight was quite lost. The right eye was, at the same time, affected in a similar way, and on the evening of Sunday she could not see with either eye.

She had some pain in right eye, none in left.

On admission to the West London Hospital, on Oct. 23, no swelling or sign of injury could be found on back or neck. She is only able to tell strong light from shade.

Complains of no pain; surface cool; heart and breath-sounds normal; no albumen in urine.

Oct. 24.—Examination of eyes by Mr. Vernon:—

'She has bare perception of light with either eye; both pupils dilated and fixed; optic disc swollen, with irregular outline; veins engorged and obscured in places. The whole fundus oculi paler and more yellow than natural. No hæmorrhage anywhere. The same description applies to both eyes.'

Two leeches were applied to each temple, and 3 grains of hydrargyrum c. creta given every three hours.

28.—Patient much the same. Irides rather more active.

To have 30 minims of liquor hydrargyri perchloridi in ½ oz. of decoctum cinchonæ, three times daily.

29.—Two leeches applied at temples, with free flow of blood.

30.—Is able to see objects passing between her and the light. Sees best by gas-light.

Nov. 1.—Mr. Vernon demonstrated the discs with the ophthalmoscope.

Right optic disc extremely swollen; its outline completely obscured, so that it can hardly be distinguished from surrounding fundus, which is of an ashen grey colour. Veins very congested; pupil very large.

Left Eye.—Margin of disc obscure, but less so than that of right eye. Veins congested, and surface of disc apparently full of new blood-vessels. Pupil moderately dilated.

Liquor epispasticus applied behind ears.

3.—Is able to tell number of fingers held up before left eye by gas-light. Ordered pot. iodidi gr. iij; spir. ammon. aromat, ℥xv; dec. cinchonæ ʒj; M.; three times daily.

7.—Can see well enough to find her way about the ward.

Urine examined; clear, sp. gr. 1020, no albumen.

8.—Sight tested by Snellen's test type on board, $\frac{2}{200}$. Evening, $\frac{1}{70}$. She could therefore distinguish letter 200 at distance of two feet.

18.—Some pain in head and sickness. Ordered liquor strychniæ, ℥iij; infusi. calumbæ, ʒ ss.; three times daily.

21.—Sight, $\frac{1}{30}$.

22.—Ophthalmoscopic examination by Mr. Vernon. Optic discs clearly defined, but pale and anæmic, surrounding retina slightly thickened and opaque. Resume potass. iodide.

25.—Complains of frontal headache. Pulse 120, and some small boils have come on shoulders. Omit iodide of potassium, and take liquor. strychnia, ℥ iij; tr. ferri. perchloridi, ℥vj; infusi. calumbæ, ʒss; three times daily.

28.—Can see well.

Dec. 7.—Can read, and was discharged from hospital.

23.—Came as out-patient; sees well, and can read with comfort. She has gained flesh, and is looking remarkably strong and well.

Remarks.—The ophthalmoscopic appearances seen in Kate G.'s case led Mr. Vernon to pronounce it a true optic neuritis, and not a mere congestion of the discs due to impeded return of venous blood from the eye into the sinuses.

A condition of strangled disc, called by the Germans *Staungs Papillæ.*

Admitting, then, that there was here a true optic neuritis, to what cause can we refer it?

When the girl was seen by me as out-patient, in consequence of pain and tenderness about the cervical spine, I suspected some abscess might form as a result of inflammatory action.

When complaint was made of failure of vision, I felt disposed to connect this failure with disease extending to the upper part of the spinal cord. Ever since (several years ago) a case was brought rather prominently under my notice, in Abercrombie's work on 'Diseases of the Brain'—where gradual paralysis and complete loss of vision were associated with induration of the cervical portion of the spinal cord, the brain itself being reported healthy—I have considered the possible connexion of spinal disease in cases where vision has been seriously impaired.

That vision may be lost rapidly without any sign of spinal affection is well known. I can recall a case where a girl, under my care as a dispensary patient, lost her eyesight just as rapidly as Kate G. did; but instead of recovering it, she died, with all the symptoms of meningitis and cerebral effusion.

It is also well known that there may be much disease of the upper part of the spinal cord without blindness. In 'Dr. Bright's Medical Reports' three cases of death from paralysis due to abscess, in connexion with the cervical vertebræ, are recorded, but no mention is made of loss of vision.

If loss of vision be due to disease in the upper spinal cord, I should agree with those who consider that the great sympathetic nerve is involved, through its communications with the anterior roots of the spinal nerves.

I should expect as a sequence to see progressive atrophy of the disc and incurable blindness.

In Kate G.'s case my belief is that the stiffness and pain about the neck was due to slowly progressing basic meningitis; the optic nerves were involved by contiguity of tissue as the inflammation extended.

Bright's disease was out of the question. The previous health of the patient had been good, and the case seemed quite one requiring some depletion, with internal administration of mercury. The treatment has been already detailed,

with the result; and it may, I think, be accepted as a testimony to the value of mercury in subduing inflammatory action about the brain and preventing impending mischief.*

XXV.—*Case of Paralysis of the Serratus Magnus.* By G. Vivian Poore, M.D. *Read February* 12, 1875.

JAMES S., a married man of slight build, æt. 43, engaged in the timber trade, while unloading a timber waggon on May 19, 1874, over-exerted himself, and says he 'strained his right arm.' The same evening he felt pain in the arm, and had a painful feeling of numbness in the thumb and fore-finger. He seems to have suffered very much, and he sought relief first at Guy's Hospital, and then at University College Hospital, where he was seen by Mr. Marcus Beek and Mr. Christopher Heath. There was at that time nothing objectively wrong with the arm.

On July 24 Mr. Heath sent the patient to me. *There was then no sign of paralysis*, but there was considerable pain, especially during the exercise of any of the muscles of his arm. There was distinct tenderness over the brachial plexus, in the axilla, and over the median nerve at the bend of the elbow, but nowhere else. He complained of pain and numbness in the pulps of the thumb and forefinger. There was marked redness (but no glossiness) of the back of the right hand and wrist, and he stated that the skin at the root of the right thumb-nail perspired a great deal. On testing him with both the faradic and galvanic current, there was no sign of impaired or increased irritability of any of the muscles of the right arm; but the skin of the back of the hand, which was preternaturally red, was exquisitely sensitive to the current. Stated that 'At first he had pain up the side of the neck, and round the blade-bone, and the head was drawn to the right; but this is all gone now.' One of his great difficulties was in stretching out his arm to 'reach invoices from the shelf over his office desk' (a movement which would involve the use of the serratus magnus). He could not do

* I may add that Mr. Vernon and I have examined the patient this day (January 22, 1875), and vision, as tested by Snellen's type board, is normal. There is no tenderness or pain about neck. Optic discs look pale, veins full, arteries small. General health in all respects good.

this, he said, because of the pain. On asking him to make this movement, he was restrained by the pain. All muscular acts performed with the right arm were painful, and, as a consequence, performed with some difficulty. Previous to my seeing him his treatment had consisted of rest in a sling, opium liniment, soap liniment, and, on one occasion, a hypodermic injection of morphia. Nothing, however, had given him any relief except the morphia. The effect of the continuous galvanic current was tried, combined with the exercise of those muscles the movement of which caused him pain. The result was most encouraging, and on the first occasion of employing this treatment the relief given was so marked that the patient stated it was like 'waking from a dream.' Not only did the pain disappear, but movements which hitherto had been restrained by the pain—such as the stretching out of the arm—were accomplished without difficulty. After first using the current he was free from pain for many hours, and after a few repetitions of it he seemed to be well, so that on Aug. 1, the fifth occasion of its application, he dismissed himself as well. *At this time there was no appearance of paralysis of the serratus*; the pain and tenderness had gone, but the redness of the hand and the numbness of the thumb and fore-finger remained.

On Aug. 20 he came back, saying that his pain had returned three days previously. The pain now was along the external side of the humerus and round the blade-bone. On asking him to repeat the movement of stretching out his arm, it was evident that he was suffering from paralysis of the serratus magnus. On Aug. 20 I left town, and did not return till October, but Dr. Gowers most kindly took the patient under his charge at the Queen's Square Hospital (where, however, he attended very irregularly), and where he received medicine and electrical treatment.

I next saw the patient on Oct. 31, and his objective symptoms were the same as on Aug. 20, and up to the present time the symptoms have scarcely altered. With his arms at rest by the side there is hardly any obvious deformity, but close observation shows that the lower angle of the right scapula is a trifle nearer the middle line than the same angle of the left scapula. On asking him to raise his arms to a right angle with the body, and in advance of the trunk, a movement which necessitates the full action of the serratus magnus, a very marked deformity is produced. The spinal border of the right scapula, starting away from the

costal wall, and forming a projection about two inches high to the right of the spinal column. (See fig. 1.) The inferior angle remains stationary, but the upper end of the spinal border approaches the middle line in a slight degree. (See fig. 2.) The two shoulders are on the same level, and there is no obvious difficulty in raising the right arm above the level of the shoulder.

Fig. 1.—Shows the deformity caused by the wing-like projection of the scapula, on the side of the paralysis. (From a photograph taken Nov. 4, 1874.)

On inspecting the axillary region, the digitations of the serratus magnus are evident on the left side, but cannot be detected on the right. (See fig. 3.)

The effect of the paralysis on the shape of the thorax is remarkable, and is well shown by means of sections of the thorax taken with a leaden cyrtometer at the mid-scapular level. (See fig. 4.) With the arms at rest by the side, the sections appear nearly bilaterally symmetrical; but when the

His *treatment* since Oct. has been almost nil. He has been seen occasionally, and has been faradised, as much for the sake of observation as anything else; I think, however, that during the last month or six weeks his deformity has decidedly decreased, and the man says distinctly that he feels stronger.

Remarks.—One point of great interest in this case is the time of the appearance of the paralysis, which was not till

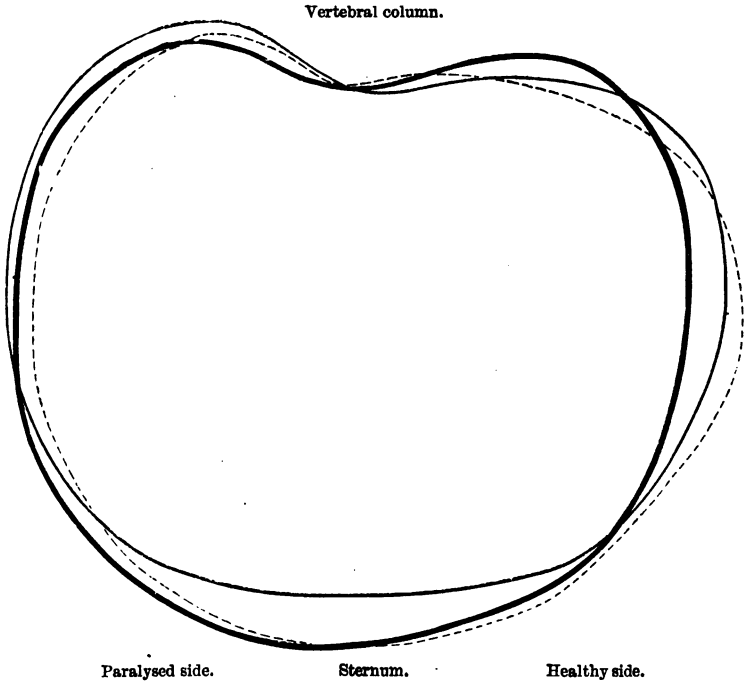

Fig. 4.—The thick and thin outlines are sections of the thorax, at mid-scapular level, irrespective of any respiratory act. The thick, when the arms are at rest by the side; the thin, when the arms are held at a right angle and in advance of the trunk. It is to be observed that during the latter act the thorax bulges laterally (on the healthy side) and the sternum recedes. The dotted outline is a section during deep inspiration with the arms extended; the lateral bulging is slightly increased and the sternum comes forward again.

three months after the date of the mishap to which the patient attributes his troubles. The strain seems to have affected the brachial plexus, and to have caused a sub-acute attack of neuritis, as evidenced by the pain, the tenderness along the nerves, and the congestion and sweating of the hand. Why did not the paralysis declare itself earlier? It

might be said that the inflammatory change had begun in one of the nerve trunks, say the median, and creeping slowly upwards had, by an unlucky accident, fallen with undue severity on the special branch which supplies the serratus. That this was not probably the case is shown by the fact that quite early in the history we find pain and trouble while executing movements involving the serratus, thereby making it probable that this nerve was early affected. I am afraid it is

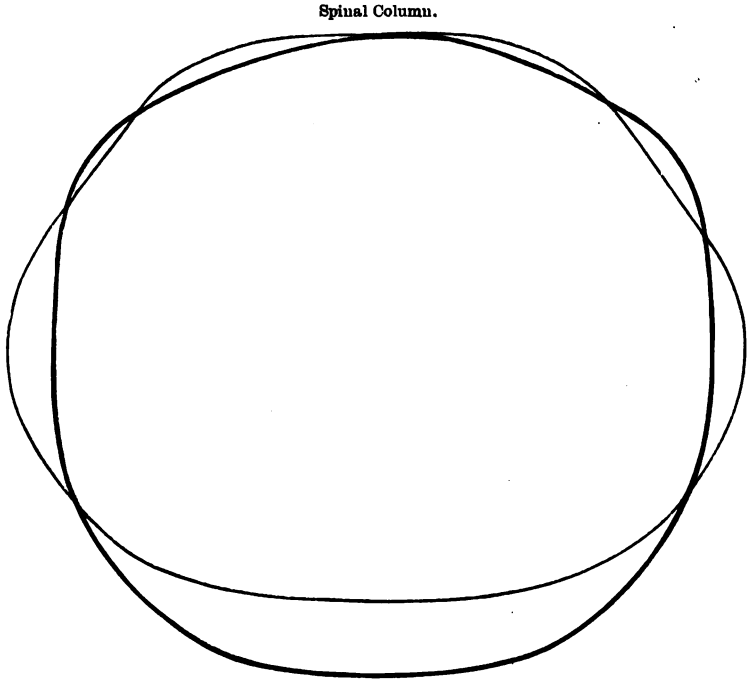

Fig. 5.—Diagram showing the action of the serratus magnus on the chest wall, irrespective of any extraordinary respiratory act. The thick outline shows a section of the thorax when the arms are hanging by the side and the serratus magnus is not in action. The thin outline shows a section of the thorax when the arms are raised to a right angle and in advance of the trunk, the serratus magnus being then in full action. The sternum recedes and the thorax is widened in its lateral diameter.

possible that the use of the galvanic current in July may have done harm indirectly, and, by removing the pain which was acting as a wholesome check on movement, encouraged action where rest was needed, and so converted pain into paralysis. The case is interesting also because although there can be no

serratus is put in action the symmetry disappears, the left side bulging laterally, owing to the upward pull of the ribs by the left serratus, while the right side exhibits the projec-

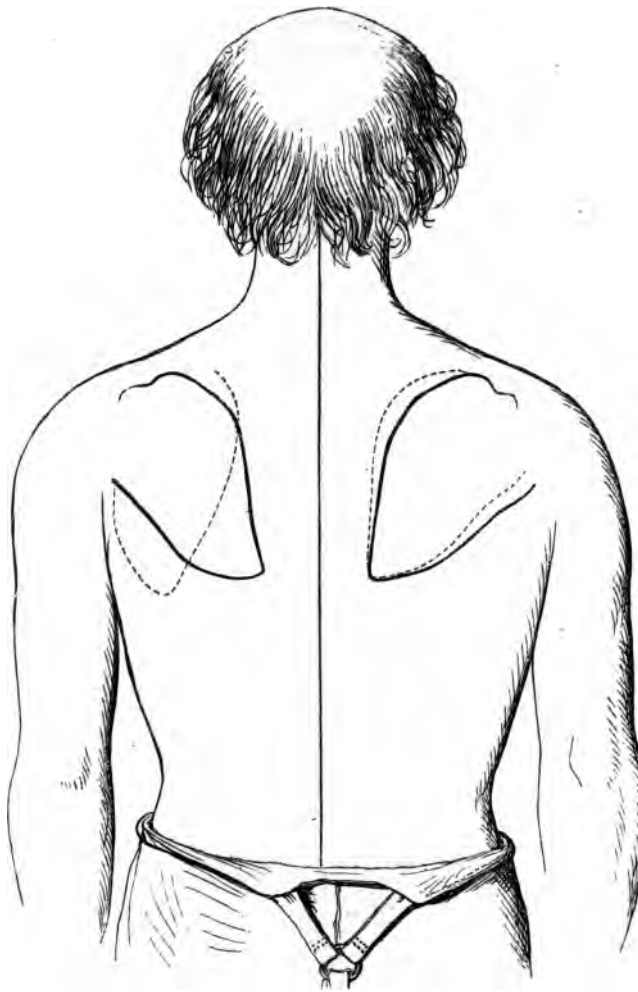

Fig. 2.—The simple lines show the position of the scapulæ when the arms are at rest by the side. The dotted lines show their position when the arms are raised.

tion backwards of the scapula, and very little change besides. The holding of the arms forwards causes great recession of the sternal portion of the chest, due apparently to the back-

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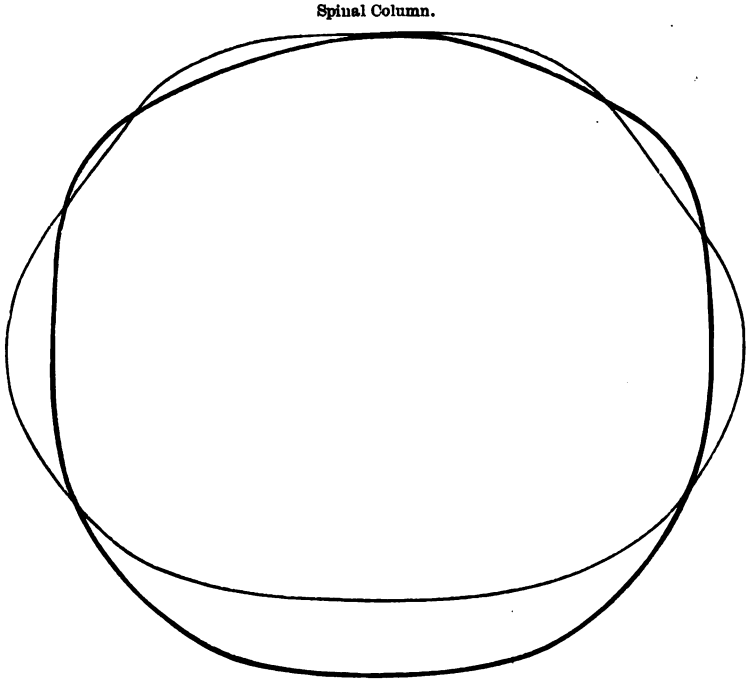

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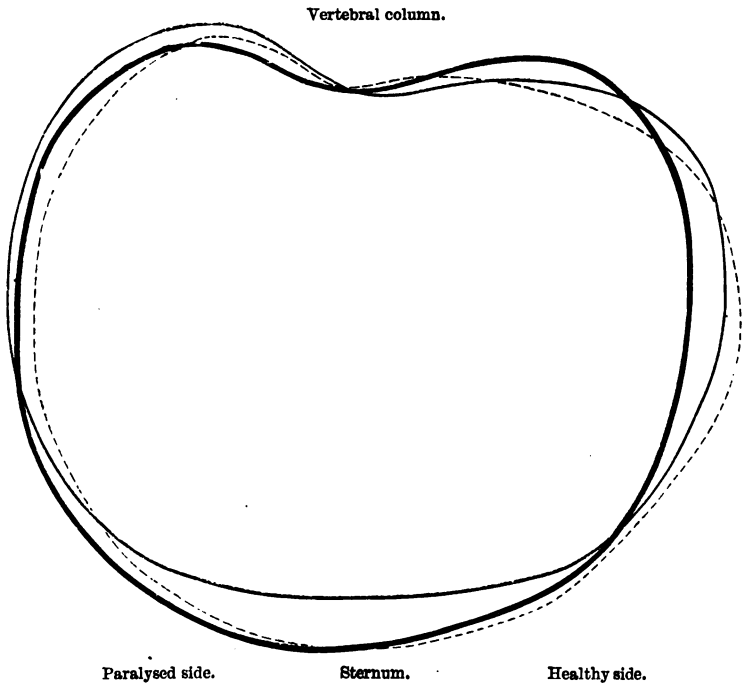

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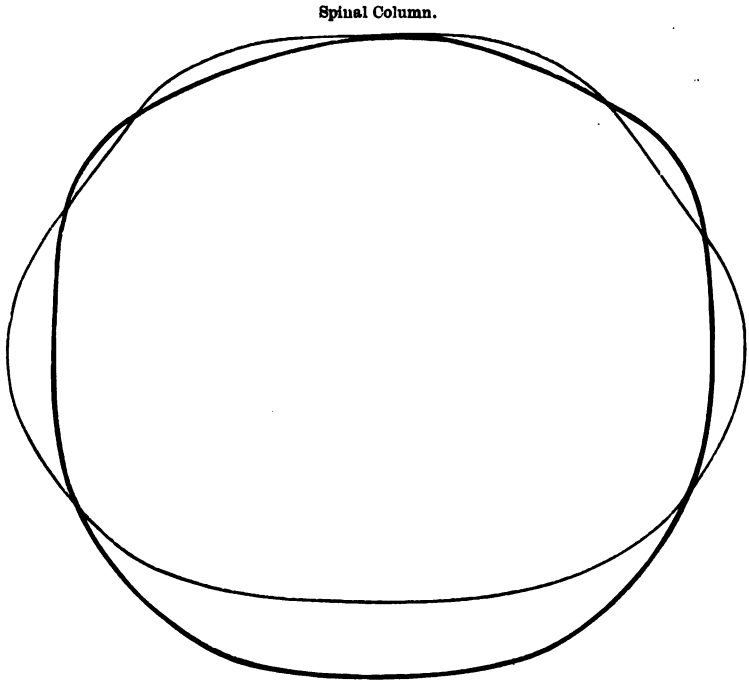

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doubt that the serratus magnus is paralysed, and completely paralysed, and although no other muscle is affected, yet the phenomena exhibited by this patient differs from the description given by Duchenne and Niemeyer.

Duchenne says ('Electrisation Localisée,' 3rd edit. p. 939), 'At the moment when the patient separates his arms from the trunk, and mainly when he carries them in advance of him, we see the scapula execute two principal movements. 1. A movement of rotation on its vertical axis, so that the spinal border separates itself from the costal wall. 2. A see-saw movement, by which the inferior angle is raised and made to approach the middle line while the external angle is depressed.'

This last phenomenon was not observed in the patient, but on the contrary the upper end of the spinal border was pulled upwards and inwards by the action of the levator anguli, trapezius and rhomboidei. (See fig. 2.)

Niemeyer ('Text Book of Practical Medicine,' translated by Humphreys and Hackley, vol. ii. p. 336) makes the following statement: 'The serratus is especially required in the act of elevating the arms above a horizontal line, as it then draws the lower angle of the scapula outward and turns the glenoid cavity of the joint upward. It is by this act alone, and not by the contraction of the deltoid, that we are enabled to lift the arm above the shoulder. . . . The patient is unable to lift his arm above a horizontal line, and is thus rendered extremely awkward. Anyone who has often watched a patient with this affection put on or take off his coat or shirt, will be able to make a diagnosis in the next case he meets with from these acts alone.' An inspection of this patient will show that although the chief signs of the paralysis are too well marked to admit of any doubt as to its presence, yet he can raise his arm and put on his coat without much difficulty.

It may seem a paradox to state that the patient 'got well,' but did not recover. The lesion from which he suffered on Feb. 12 still remained (May 18), but the patient makes no complaint, and is able to follow his occupation and use his arm without pain or difficulty. His improvement was due, not to the recovery of the serratus magnus, but to the compensating growth of other muscles which serve to keep the scapula in its place (the rhomboidei and trapezius).

The case presented a marked contrast to another case of paralysis of the same muscle, which the author of this paper

was enabled, by the kindness of Mr. Carsten Holthouse, to bring before the Society on Feb. 26. The second patient was a man æt. 28, who had fallen upon his back a couple of months previously, and who, in addition to the wing-like projection of the scapula, suffered to a marked degree from that inability to raise the arm above the shoulder, upon which Niemeyer insists. On examination it was found that not only had there been no compensating hypertrophy of the trapezius and rhomboids, but (as the result of direct violence probably) there was well marked wasting, certainly of the trapezius (upper part), and probably of the rhomboidei, as evidenced by a smaller mass on the right side as compared with the left over the situation of the rhomboidei when these muscles were put in action.

The author believes that the effect of the paralysis on the shape of the thorax has not previously been dwelt upon, and he is glad to be able, by the aid of the cyrtometer, to present these changes graphically. Another effect not mentioned in the body of the paper, but which was well marked in both these patients, was an unnatural 'roundness' of the thoracic wall on the side of the paralysis, which was evident on inspection.

Both the patients mentioned were exhibited to the members of the Society, the one on Feb. 12 and the other on Feb. 26, 1875.

XXVI.—*Lepra Anæsthetica.* By R. Southey, M.D. *Read February* 12, 1875.

WILLIAM S., æt. 25, was under my care at St. Bartholomew's Hospital, Dec. 12, 1874. He is of a fairly healthy complexion, and, with the exception of his affected limbs, is in a state of moderately good muscular condition.

The first and most characteristic peculiarity is seen in his hands, which are cold and wasted-looking, with shrivelled, wrinkled skin. When he opens his hand, the bird talon-like position assumed by the fingers and the incurvature of the back of the hand at once attracts attention, and served, in his instance, to enable me at once to recognise his disease—namely Lepra Anæsthetica, which I had paid some attention to twelve years ago, when I was a travelling Fellow of the

University of Oxford, but which I have seen no example of since. Its scarcity in England, and certain peculiarities about the individual case, have led me to bring the man here, in order to show him to the Society.

At first sight the case might be passed over as one of ordinary locomotor-ataxy or muscular paralysis, from which it really differs very essentially, since the anæstheria is a far more important feature than the impairment of muscular power.

The skin and tissues of both his hands and feet are affected, and upon minute examination of them it will be observed that the parts affected are not merely wasted from absorption or diminution of the ordinary subcutaneous fat, but from generally impaired nutrition.

The tactile sense has almost altogether disappeared, and the organs by which it is carried on have especially suffered. Thus the skin at the finger tips and on the palmar surface is nearly quite smooth. The concentric rows of papillæ are scarcely discernible.

Here and there upon the fingers are scars of old burns and injuries, and he will tell you that these have arisen from his holding things—cups and plates—which were too hot, and which blistered him without his being conscious of the fact. Although he neither feels a prick or a hurt, he is fully alive to the necessity of taking special care to avoid burning or bruising himself, by reason of the troublesome ulcers that succeed; the difficulty, as he expresses it himself, 'with which my skin heals after any injury, although I never feel it at the time.'

I have asked him to show you the parts where he very recently burnt himself at the hospital, and also to call your attention to a sore place now looking nearly healed upon the plantar surface of his right foot. This ulcer, situated near the ball of his great toe, is one of the several peculiar clinical features of his complaint, and serves materially to aid in its diagnosis.

It may be, as he avows, the result merely of an injury from his boot. It is not exactly in the ordinary Spedalsked ulcer site, and its mode of commencement I did not observe, but it is ominous both by situation and aspect.

The plantar or Spedalsked ulcer is usually located midway between the ball of the great and the ultimate phalange of the little toe. Here the skin comes to present a livid aspect over a small area, beneath which fluctuation can be felt. The cel-

lular tissue degenerates or melts down into a viscid ichor, the skin sloughs away, and the fluid escapes, leaving the muscles bare.

An irregular shaped ulcer forms, with hard borders, and continues to burrow deep between the muscles and the bones, lamellæ of which, and more rarely large pieces, eventually come away.

The peculiarity of such an ulcer is its intractability. It cannot be stimulated into any healthy reaction, and it lasts, in most patients, all through the rest of his life.

Danielsen regarded them as admirable indices of the patient's state of health and measures of the prolongation of his case. If they discharged much, and presented healthy pus-like secretion, so much the better was the patient's prospect.

If they contracted or diminished running, some alteration for the worse—fever, sleeplessness, headache, local pain, vomiting, or swelling of the inguinal glands—might be anticipated.

Their complete drying-up or healing generally marked imminent danger to life; death, with cerebral or spinal symptoms, usually shortly succeeding.

The ulcer on the sole of the foot in this man looks nearly healed, and I am bound to admit that he shows no evidence whatever of being worse, but looks, and I believe is, in better health than he was six months ago.

The history of his illness confirms, I think, entirely my diagnosis of his disease.

He was born of English parents, and had resided up to November, 1873, in Southern India. At the Neilgherry Hills, upon a chinchona and coffee plantation, six years ago, in 1869, he contracted some venereal affection, which was followed by severe crops of boils, and by two whitlows upon his fingers; shortly after these whitlows healed, he noticed some impairment of sensation, first in one finger, which gradually extended over both hands. At or nearly at the same time a large patch of discoloration of the skin, occupying an area of some twelve or fourteen square inches, over, above, and below the right knee, attracted his attention; at first it was of a dusky red colour; the patch felt, he says, a little thicker than the rest of the skin, and itched slightly. He does not speak of any pain in the patch, nor does there appear to have been any perverted sensation, as of pins or needles, or hyperæsthesia, such as is vouchsafed in this stage of the disease in many examples of it. But

anæsthetica, or loss of sensation over the patch, became early apparent to him, so that he could prick or scratch it without evoking the slightest pain. Subsequently several similar patches showed themselves in different parts of his body, the most recent having involved his right ear and left eyebrow. The ear, however, is certainly not anæsthetic; he states that it was so some seven months ago, when he first left India, and that it has recovered sensation since his sojourn in England.

Gradually, and almost *pari passu*, he lost sensation in his hands and feet entirely, but up to fourteen months ago he observed no wasting of the muscles or deformation of his hands. During the last year however the contraction of his fingers, and alteration in shape of his hands, has been more and more forced upon his attention, as also dull, heavy aching, and occasional dragging pains in his fingers, which extend up the forearm to behind the elbow.

The discolored patches of skin have now almost entirely faded out, or are only apparent when he is placed in a hot bath. The patches of skin, however, present the usually ensuing loss of sensibility. They have not yet attained the stage of pale, tough, non-vascularity which makes them feel and look like old scar tissue—a condition of things which is observed in these patients at a later period of their disease.

The patient came to St. Bartholomew's from the London Hospital, where he was three months under Dr. Fenwick, and has consulted various physicians in different places. He is an intelligent fellow, and his opinion of doctors and their advice is humbling but sincere. He says 'all who have known anything about the nature of my complaint held out no hopes of my being cured of it if I remained in India. Both in England and in India many call it the venereal disease, because I have had a sore throat, and because my skin has been discoloured.'

He has taken mercury, although never to salivation, arsenic, liq. potassæ, and iodide of potassium by shovelfuls. He does not speak gratefully of the last drug, saying that beyond having a nasty metallic taste in his mouth and making his mouth sore, it never appeared to benefit any of the symptoms of his disease.

He went through a course of galvanism, whatever that may mean.

I have ventured to bring this man before the Society, for the disease is rarely seen in this country. The case, too,

illustrates non-progression of the complaint, and perhaps some amelioration from change of habitat.

It is interesting, further, to notice, in regard to this poor fellow, that he was born and has lived in India, in the hill district; that both his parents were born and lived in India; that his grandfather was the original settler or migrator from this country.

The two generations of acclimatisation have in his instance sufficed to confer such an altered *habit* or idiosyncracy upon one of European race as to enable him to acquire a specially indigenous disease.

I will not trouble the Society with any remarks upon the pathology of the disease, which has been investigated with such care and length by the eminent Professor Danielsen, of Bergen, and Dr. Vandyke Carter.

XXVII.—*Case of exceeding Infrequency of Pulse.* By Pugin Thornton. *Read February* 26, 1875.

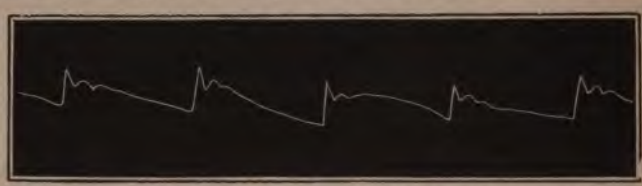
P. B., a married woman, aged 20, very anæmic and thin, was admitted into the Hospital for Diseases of the Throat in November 1872, on account of acute syphilitic laryngitis. She was under the care of Dr. Morell Mackenzie, to whom I am indebted for being enabled to bring the case forward.

On Nov. 16 I was requested to perform tracheotomy upon her, her pulse at the time beating 40 to the minute. A few hours after the operation she had a kind of epileptic fit, convulsive movements of the limbs and body, with contortions of the face, lasting for about an hour. She was not seen by any of the staff until recovering from the attack. Her pulse then was the same as before the operation. A week before coming into the hospital she had had a fit, but it had been of very short duration. She remained in the hospital for four weeks without any recurrence of it, taking during that time iodide of potassium daily, and it was not until after her return home that there was any return of the seizures. For three days then she had frequent attacks of giddiness, each lasting only a few seconds. They were accompanied with noises in the head, as of rumbling of carriages. At the end of this time, Dec. 29, she was again admitted into the hospital, and on the following day I found her pulse to be

beating only 16 times a minute. The pulsations were strong. From Jan. 1 to 4 it was about 20 to the minute, and on this latter day a sphymographic tracing was taken (No. 1 *). She had during these few days attacks similar those she had

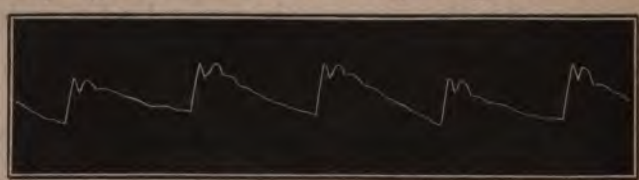
No. 1.—Jan. 4, 1873. 20 beats per minute.

previously had, but they were of a very transient nature, only lasting a few seconds. The pulse after this gradually increased in frequency, soon getting up to 40 beats per minute (tracing No. 2), at which number it steadily



No. 2.—April, 1873. 40 beats per minute.

remained up to the date of her discharge from the hospital, and, as will be seen by the tracing taken in February 1874 (No. 3), it was then still the same. There was never found to be any organic disease of the heart, though at most times a



No. 3.—Feb. 1874. 40 beats per minute.

functional murmur was heard. During her second stay in the hospital the cannula was removed, the laryngeal stenosis having completely disappeared. I saw her yesterday, when

* It will be noticed that there is a small beat following the first pulsation; this occurred after every tenth beat. Three hundred and fifty grammes pressure was used in each tracing. Sphymograph by Mayer and Meltzer, of Great Portland Street.

she was in good health and her pulse was 48 per minute, which it has now been for about a year. She has grown very stout. She was still obliged periodically to take iodide of potassium.

It appears from the woman's account that the epileptiform seizures began in the summer of 1870. The first time she fell from her chair a short time after dinner. She recovered consciousness in a few minutes, but during that day had another fit. She had no more until a week afterwards, when she was staying at Nottingham. Then, for seven weeks, they were of frequent occurrence, not again appearing until November, 1872.

Whilst at Nottingham she was under the care of Dr. Ransom, who has very kindly sent me the notes of her case; and as he vividly describes the attacks, which he constantly witnessed, and which I never fairly did, I will give them in full.

'Aug. 3, 1870. — Present illness began five weeks ago, without any assignable cause, after a good meal, she suddenly falling from her chair in a state of insensibility. At regular intervals since that time she has had several similar fits. During the last fourteen days they have been more frequent. Now they occur when in bed or when up, asleep or awake; are very numerous and sharp, so that she may have ten or twelve in fifteen minutes. In intensity they are variable.

'A severe fit begins with a sudden pallor of the face, loss of consciousness and motor powers. The heart ceases to beat for several seconds (on one occasion, in a very moderate fit, cessation of heart's action was noted by stethoscope and watch for fifteen seconds); next the respirations quicken and become laboured, almost stertorous, the face flushes, the eyes are suffused, they stare and turn upwards. She foams at the mouth, and then soon returns to consciousness with a calm expression and without a sign of distress. During recovery the pulse returns to its normal rate, which for the last week has been at 24 beats a minute, by irregular steps, which are always slow. Her intellect is clear and memory perfect. She is calm, almost unnaturally apathetic. Her speech is, and has been for the last two days, indistinct in articulation. Sleeps often heavily, perhaps due to the bromide of potassium, of which she has taken from 40 to 60 grains daily for the last fortnight. Sense of touch normal in both hands. Aug. 5. — Ordered 5 grains of iodide of potassium daily, and

iodine liniment to back of neck. Yesterday and to-day she has had visions or hallucinations like those met with in delirium tremens. She talks of them as delusions, and is not entirely possessed by them. They are only during a fit, and in this respect the fits are changed, inasmuch as the fits before were a blank to her, the unconsciousness having been complete. She now remembers when she comes round that she has had spectral illusions, and recognises them as such. The fits, suddenly but briefly, suspend consciousness, interrupting anything she may be doing or saying; but she is able on recovery to take up the thread of her thought or conversation. In some respects she is better. She has more motor power, walks and handles things better, and takes more food. The fits are, however, as frequent and severe. Yesterday she had 45 in one hour, and as she expressed it, "she never seemed to have her senses." A cardiac intermission noted of 18 seconds duration.'

I myself am at a loss to account for the extraordinary phenomena, except that I feel confident they arose from a syphilitic cause. Dr. Goddard, of Pentonville Hill, whom the woman was under when her illness first commenced, has no recollection of her suffering from any of the sequelæ of syphilis, nor has Dr. Ransom, of Nottingham. Neither can I from personal enquiries get any clue to support this theory; and yet there was not the slightest doubt that the laryngitis, on account of which the tracheotomy had to be done in 1872, was syphilitic, and the recurrence of the epileptiform seizures took place at the same time, she having been free from them for two years. It was to be presumed that the pneumogastric nerve was in some way affected by the syphilitic poison.

XXVIII.—*Case of Excessive and long-maintained High Temperature after Spinal Injuries, with Recovery.* By John Wm. Teale. *Communicated by* Dr. S. Ringer. *Read February* 26, 1875.

I PROPOSE, as briefly as I can, to lay before the Society some particulars of a case of recovery from severe injuries, in which a temperature ranging from 108° to 122° and upwards had been maintained for a period of nearly nine weeks.

On Sept. 5, 1874, Miss G. was riding with a party of friends, she being an experienced horsewoman. She was mounted on a powerful hunter, which though quiet was very fresh, and with two others was riding in advance across a field, towards a five-barred gate, and not intending to jump it, with difficulty pulled up her horse, so that his shoulder touched the gate. At this moment the sound of the other horses' hoofs was heard as they crossed some shingle. Her horse, startled at the sound, reared, and took the five-barred gate at a standing jump. He struck the top bar with his hind legs, and turning sharply round fell with a crash upon Miss G., who had only time to disengage her foot from the stirrup. The horse then rolled backwards and forwards over her chest two or three times as she lay on the ground, which was covered with large rough stones, when still retaining her self-possession she raised herself on her elbows and the horse rolled clear of her. She then staggered to her feet, and immediately fell back fainting into the arms of one of her friends.

Her unconsciousness, however, was only momentary, and she was shortly laid on the floor of a white-chapel, and brought to her friend's house in Scarborough, a distance of five or six miles, where I was ready to receive her, having had notice of the accident.

With the assistance of my friend Dr. Cross we carried her to bed, and on examination found simple fractures of the fifth and sixth ribs about their middle, on the left side, probably caused by the pressure of the third crutch, which was crushed flat on the saddle. She was conscious, collapsed, complained of great pain in the back, and was severely bruised in various parts of the body.

For some time Miss G. went on as well as possible. For a few days after the accident there was a slight feverish reaction, the temperature running up to 101° and becoming normal in a fortnight.

The ribs united readily, and as there was perfect power over the limbs she appeared to be approaching convalescence. There was still, however, a good deal of pain and tenderness over the spine, especially about the sixth dorsal vertebra.

Oct. 3.—As this pain was rather increasing, and slight feverishness returned, Mr. Pridgin Teale, of Leeds, who had in former years attended Miss G., was sent for to see her with me.

In consultation we came to the opinion that there was subacute inflammation of the spinal ligaments, resulting from the injury, and we hoped that with perfect rest and other treatment our patient might soon be well.

Throughout October Miss G. remained much the same, with a temperature of 100° to 101° and neurotic tenderness over the spine, sometimes amounting to severe pain. She slept badly, was often depressed, and had occasional jerkings and twitchings of the limbs, the arms being unaffected. She complained of the feeling 'as of a cord tied tightly round the waist.'

In spite of leeches to the spine, ice-bags to the head and spine, and other treatment, the temperature slowly and steadily rose, until on Nov. 3 it was 103·4°, on the 6th 106°, and on the 7th 107°, the respiration being at the same time normal, and the pulse not exceeding 100.

On the 7th Mr. Pridgin Teale again came from Leeds to see her with me, and after careful examination we gave as our opinion that there was inflammation of spinal ligaments and of inter-vertebral substances and possibly of the membranes of the spinal cord, but we still thought the spinal cord itself was only secondarily affected by the pressure of neighbouring inflamed parts, as there remained considerable power over the lower limbs and the splincters were unaffected, and there was no absolute paralysis of sensation or motion.

On my brother's second visit, on the evening of Nov. 8, the temperature had risen to 110°, and we felt the prognosis for our patient's recovery was of the gloomiest.

Leeches were again applied, and we determined to bring the system gently under the influence of mercury by means of ointment applied to the thighs. On Nov. 11, 12 and 13 the thermometer gradually rose to 111°, 113°, 114°, and at 4 A.M. on the 13th and at 10.30 P.M. the detached portion of mercury (index) was buried in the bulb at the top of the instrument at a point above 122°, the pulse, which had previously being 100, rising to 120, and becoming small and thready, and sometimes being scarcely perceptible.

Nov. 14.—During this time Miss G. became rapidly emaciated, the pain in the back of the head and down the spine was intense, and was only relieved by hypodermic injections of small doses of morphia frequently repeated, and she often appeared to be in a sinking condition. At times the power of swallowing was lost for several hours, once for forty-eight hours, the attempt even to swallow the saliva being followed by severe agony lasting several minutes. Nutritive enemata

were occasionally given, ice-bags were applied to the head and spine, and beef tea, milk, &c. were given in small quantities when they could be swallowed.

On the 16th, the gums being slightly tender, the mercurial ointment was removed, and from this date, although the temperature remained as high as ever for several weeks, there was some slight improvement in the general symptoms, whether in consequence of, or in spite of, the mercurial treatment I will not venture to say. Power of swallowing gradually returned. The pulse fell to 110, and improved in quality. The pain at the back of the head and spine became more bearable. The twitchings in the legs were less frequent, and she could raise them in bed more freely.

Though I still watched with interest and curiosity the extraordinary high readings of the thermometer, they did not cause the alarm they had done, owing to the improved condition of the patient, and the fact that she had lived so long with a temperature supposed to be incompatible with life.

On Dec. 12 a new difficulty arose from a sudden swelling of the tongue, causing great agony and distress, which however subsided in about twenty-four hours after the application of leeches to the outside of the throat above the hyoid bone.

Dec. 13.—From this date more decided improvement set in. Her appetite increased, she gained flesh and power; but as the temperature still ranged from 110° to 114° she was kept rigidly in bed.

Jan. 7, 1875.—The temperature fell to 104°, on the 8th to 102°, and on the 10th it was normal. On the 12th Miss G. was able to take a few steps about her room, a slight drag of the left leg being perceptible, and on the 22nd she was able to walk 100 yards in front of the house, being to all intents and purposes convalescent. The result proves, I think, that we had diagnosed correctly that the cord itself was not seriously implicated, and also that an excessive and long maintained high temperature is not necessarily destructive of life.

Remarks.—1. At least seven different instruments were used at various times in taking the observations; most of them supplied by Harvey and Reynolds of Leeds, and two by Wood of York.

Four of these instruments have been verified at Kew, and the certificates, showing them to be nearly accurate, are with them on the table.

2. I found it difficult to get an instrument that would register above 118°. Mr. Hewetson, of Leeds, got me one from Harvey and Reynolds which was marked up to 122°, and the highest readings were taken with this one. On Dec. 1 for the fourth time the whole of the index was buried in the bulb. I have kept the instrument as I found it then, and now submit it for inspection. As the instrument is marked 122° and the index was in length equal to three degrees, I venture to think this is really equal to 125°.

3. The temperatures were generally taken in the axillæ, very often one thermometer being placed in each, and the instruments being reversed each time. The temperature of the left side was usually about half a degree higher than the right, but this was not always reliable, as sometimes Miss G. was too weak to hold both instruments tight to her side.

4. On several occasions a thermometer was placed between the thighs, and this generally corresponded with those in the axilla. On the 22nd temp. in axilla 113·4°; between thighs 116°.

5. On Dec. 10 a thermometer was placed in the rectum, and recorded a temperature of 111°, that in the axilla being at the same time 110·4°.

6. Miss G. knew nothing about the temperature; and though conscious throughout and highly intelligent, at my request forbore to make any enquiries on the subject.

I regret that the investigations could not be so thoroughly gone into as I could have wished, owing to the patient's extreme weakness. Sometimes she could scarcely hold the instrument to her side, and could never bear it under the tongue.

7. Each time, before each temperature was taken, as well as afterwards, the thermometers were inspected by two or three trustworthy witnesses, and the result was immediately written down.

8. There were no hot-water bottles in the neighbourhood of the axillæ, as some of my friends have good-naturedly suggested.

9. Sometimes when the thermometers were highest the hands, feet and forehead were icy cold, and my patient would remark that 'she felt as if her blood was on fire.'

10. Whilst the temperature remained so high, the urine was excessively scanty, and a mass of lithates. It was passed with the greatest difficulty into hot towels. This quite prevented me from estimating the amount of urea or even the

specific gravity. On three or four occasions, however, I got enough to ascertain that it was free from albumen.

The bowels were relieved every third day by enemata. The menstrual period came on once after the accident at the proper time, and has since been suppressed.

Jan. 26, 1875.—The catamenia have returned properly.

11. I have prepared an enlarged chart of the thermometric readings, which shows amongst other things the rapid alternations of temperature in a few hours without apparent alteration in the condition of the patient, *e.g.*:

Nov. 12.—10.10 P.M. temp. 113·6°.
13.—4 A.M. temp. 122°.
10 A.M. temp. 114·3°.

But during seven weeks the temperature never fell below 108°, and rarely below 110°.

12. It has been suggested to me that perhaps the high temperature was not entirely due to the injury of the spine, but that it may have depended upon some lesion of the ganglia of the sympathetic. As I have no knowledge of such injuries I do not give any opinion on the subject.

13. At no time did I discover any distinct loss of sensation.

14. The temperature was generally higher on the left than on the right side. The left leg is still slightly the weaker, and it was on the left side that the ribs were broken.

Postscript to Mr. John Teale's Paper on Excessive High Temperature.

On Feb. 5, Miss G. having been for five weeks convalescent, and her temperature normal, returned to her home, a distance of about 100 miles. The effect of the railway journey was to bring on a return of the pain in the back, as well as of some of the other symptoms, though not so severely as before. The temperature also again rose, so that, on one occasion at least, it reached 110°.

I accordingly wrote to Miss G.'s brother, desiring him to call in their medical attendant, to verify the observations which he was taking with the thermometer. The following is from Mr. G.'s reply:—'On Sunday, March 7, my sister's temperature was taken (simultaneously) under the tongue, between the thighs, and under the arms, and was from 108° to 108½°.'

Writing at the same time, Mr. Henry Hind, partner of the Messrs. Trotter, of Stockton, says: 'I was asked to see

your patient, Miss G., on Sunday, March 7, and I then found her with a quiet pulse, and apparently in a good state of health, but in bed; and upon taking her temperature, I found the thermometer in use to register 108°. This I verified by using my own, which registered the same within one-eighth of a degree. I have now in my possession a thermometer lent by me to Mr. G., which is indexed to mark 110°, and after use the index was driven into the little bulb at the end.'

Since that time to the present (June 7, 1875) Miss G. has again slowly improved in health and strength. The temperature has gradually fallen, and now ranges from 99° to 101°, and is sometimes normal, though it occasionally runs up to 103° after a little extra exertion. There is still some tenderness down the spine, at times amounting to severe pain about the sixth dorsal vertebra, precisely where during her severe illness the sensation of a cord being tied round the waist was experienced. She can walk tolerably well on level ground, and go up and down stairs with the aid of the banisters, but the drag of the left leg is still perceptible.

The motion of a carriage, however easy, produces increased pain in the back, but Miss G. can enjoy occasionally to be rowed in a boat on the river.

XXIX.—*Hypertrophy of Lower Parts of the Face.* By R. Barwell. *Read March* 12, 1875.

SIMPLE hypertrophy arising without definite cause—such cause, for instance, as increased muscular action, stretching, friction, or compression of tissue—is a rare event, especially rare when no induration, interstitial thickening, or other change, accompany the malady. I therefore bring under the notice of the Society the young man now present, as no similar case appears to have been anywhere recorded. His appearance is strange, but his history is still stranger.

He is now 19 years old, a sawyer by trade, comes of a fairly healthy family, although the mother appears somewhat eccentric, and her father to be a little insane; there is no history of congenital or acquired deformities, nor of struma. Five years ago—*i.e.* when he was 14 years old—he went to bed one night at the usual time, having a rather bad cold. He slept well, but on rising the next morning found

his face and lips swollen even to a greater extent than now. The tumefaction was quite painless. It has remained in the same state ever since, but he says is rather smaller now than at first; when he has a cold the size increases. This story—seeing that the enlargement is not mere œdema, nor seems at any time to have been so—appeared to me so unlikely, that I wrote to the clergyman of his parish, who had known him and his family for years; he questioned the patient's relatives, and they confirmed his statement in every particular. He has been treated with cod-liver oil and other medicines, also by setons passed through the mucous membrane into the substance of the lip.

The increase in size affects the skin, mucous membrane, and all intervening textures; but the labial and buccal glands are not enlarged; appear, indeed, rather smaller than usual. The face, from the angle of the jaw upwards as high as the edge of the malar bones, and as far out as the masseters on each side, is greatly hypertrophied; and from this broader part of the swelling a far narrower stalk reaches upward on both sides of the nose, terminating at the inner corner of the eyes. The outline of the tumified portion thus resembles that of a Jews' harp with small mouth-piece. Considered anatomically, it is the region of the facial arteries. The great gravamen of change falls on the lips, which are pouting, almost everted—enormously enlarged, and for additional space thrown into folds—but they are not cracked, excoriated, or otherwise abnormal. The bones of the face are of natural size and shape; the tongue, though somewhat fissured, is not enlarged. The facial arteries, as they cross the jaw, are felt to be very large; about the size, at an estimate, of the radial just after division from the brachial.

I deem it would be a hazardous proceeding to cut into and remove a part of the mucous membrane and subjacent tissue. The vascularity is evidently so great that I would almost as soon cut into a cirsoid aneurism; but I propose to tie both facial arteries. From this I think considerable improvement may fairly be expected; and afterwards, if all go well, a portion of the mucous membrane, &c., may with safety be removed.

I will make it my duty to comply with the wishes of members present, and to bring this man again before the Society when the effects produced by tying the vessels may be estimated.

Postscript. Read May 28.

On March 14 I cut down to, and exposed, by a V shaped incision, first the left facial, where it crosses the ramus of the jaw, passed beneath it an aneurism needle, with double catgut, tied the vessel in two places, and divided it between the ligatures. I then performed the same operation on the right side. The vessels were very large, but owing to the great thickness of the tissue they were less easily reached than usual. The wounds were brought together and dressed. No pulsation could be felt in the coronarys or labials, but doubtful, at all events very indistinct pulse, in the angular arteries; the transverse facials beat strongly. There was no change of appearance, temperature, or colour of the face.

March 15.—Passed a good night, but after breakfast was violently sick, and again at 10. Wounds appear healthy; no change of appearance; complains of no pain.

16.—Sickness has more or less continued. This morning slight redness was observed about the bridge of the nose, and the upper lip was increased in size. The swelling spread downwards to the wounds, first the right then the left became affected, and the erysipeloid condition spread over the whole face. Has been sick almost constantly.

17.—Face still more swollen, red and full. The appearance now is indescribably strange and grotesque.

20.—Improving; redness and swelling decreasing; slight pulsation to be felt in the right facial about $\frac{1}{3}$ inch from the corner of the mouth.

28.—Much improved. One or two small abscesses have had to be opened in various parts of the scalp, and the hair to be cut off; but the erysipelas has disappeared. The lips and face are smaller, especially is the upper lip a little thinner.

April 6.—A pad is placed over upper and lower lip, confined by an elastic bandage so as to produce a certain amount of pressure.

15.—The man's health is not very good, and he was sent to the country with directions to return, and he was exhibited at the Society on the evening of May 28. The lips are a little, and but a little thinner, while the rest of the face has also slightly diminished. On the left side no pul-

sation of the facial arteries can anywhere be felt, but on the right a slight beating is to be detected about ⅛ inch from the corner of the mouth. It cannot be said that much improvement in appearance has resulted from the operation, but the vascularity of parts being much diminished it would now be feasible and safe to excise a part of the mucous membrane, and by sewing the edges together draw the lips inward. The man, however, declines at present to undergo further operation, and probably it is better to postpone interference for some months.

XXX.—*Case of Favus of the Scalp and Body (Tinea favosa.)* By Dyce Duckworth, M.D. *Read March 12, 1875.*

J. B., æt. 8 years, a small undergrown boy, was brought to St. Bartholomew's Hospital on account of favus of the scalp. The disorder was easy of recognition, and was typically developed. The entire scalp was affected, and there was but little hair to be seen. Numerous cups were found on close examination, and larger amorphous patches of the usual primrose-yellow colour.

There was a strong mousy odour perceptible at some distance from the patient.

Upon the arms and legs were some small patches of the disease, and the scars of some that had formerly existed.

The boy looked lean and ill-nourished. His mother stated that he had been affected for sixteen months, but that under a short course of treatment during that period he had been 'cured' at St. Bartholomew's Hospital. The disease, however, had returned. There was no other ailment. The cervical glands were decidedly enlarged.

There was no history of contagion. Several brothers and sisters were unaffected. The family (Irish) occupied three rooms in a house near the Mint. There were, and had been, no Scotch or German fellow-lodgers. The only cat in the house was alleged to be free from any skin-disease.

Under the microscope the Achorion Schönleinii was detected in abundance.

The treatment consisted in assiduous poulticing, epilation,

and the employment locally of hyposulphite of soda and sulphurous acid lotion.

Internally cod-liver oil and steel were ordered, and good diet was enjoined.

XXXI.—*Fatal Pleuropneumonia in the case of a Man aged* 56, *addicted to the Abuse of Morphia, Alcohol, and Bromide of Potassium.* By THOMAS WHIPHAM, M.B. *Read March* 12, 1875.

ON April 20, 1870, I was consulted by a gentleman, æt. 50, who gave me the following account of himself.

About fifteen years ago he met with a railway accident, in which he sustained some injury to his back and a fracture of the right leg. He 'suffered greatly' from these injuries for two or three years, but eventually recovered perfectly.

'For sixteen years,' he wrote to me, 'I have suffered from a pain in the rectum; and after having tried almost every good surgeon in London without obtaining any relief, I took to opium, which I always injected, but never swallowed.' The injection, first used, consisted of tinct. opii ʒss every night, and the pain was relieved for a time. About this period—*i.e.* after he had employed the opium injections for a short time—he was examined by a London surgeon of great eminence, who devoted his attention chiefly to diseases of the rectum, and by whom the bowel was pronounced to be healthy. The pain, however, recurred at frequent intervals, and as often he had recourse to opium. The half-drachm failed to relieve the pain eventually; the dose was therefore doubled. This sufficed for a time, but, as in the first instance, the drachm soon began to lose its effect. 'Things went on pretty well for ten years, the amount of opium at the expiration of that time having, of course, increased enormously. I then began to find that it affected me in a most painful way. I had horrible sensations of unfounded fear, was sleepless, and all my efforts to do my work, or attend to my business, were unavailing.' At this date he was using one ounce of the watery extract of opium in the course of the week—rather more than a drachm in the twenty-four hours.

'At last,' he continues, 'I agreed to try and leave it off, and for four months I abstained *entirely*. I need not tell

you how awfully I suffered: I was obliged to take to my bed, was sick, purged, and for sixteen days and nights utterly without sleep, and never still for a minute.' These symptoms were accompanied by sneezing, running at the eyes, and all the feelings of a severe cold. 'I had not had one for ten years.' At this time he was in the country, and the medical man in attendance gave him chloroform 'from time to time,' and this was in fact the only remedy from which he obtained any relief. He kept his bed on this occasion four weeks, 'and after that, for about three months, got about more dead than alive, sleeping about four hours a night, and in dreadful pain and misery.'

'I found at the end of about four months' (I quote again from his written account) that the state in which I was utterly precluded work, and as I depend for my bread on my practice, I was obliged to take to opium again. It had resumed its power, and twenty drops of laudanum had more effect than 2,500 had before. So I went on for four or five years very badly, but still somehow: I did my business, but now I am getting as bad as ever, and I fear I shall have to make another effort.'

At the same time a friend of my patient's was kind enough to furnish me with some additional facts in the history. I quote from his letter:—'I made his acquaintance in 1839. He was then always physicking himself, but that, I think, he left off. About 1843–5 he complained of a stricture continually, and induced some one to perform an operation upon him. I have heard nothing of the stricture for twenty years at least. . . .

'About 1855 his father died of cancer of the rectum. Since that—and not before—he has continually complained of pain in the rectum. I cannot recollect when he began to inject opium, but many years ago. All this time he had apparently good health, was able to walk his 25 miles, eat, drink, &c., and, until 1865, I do not recollect his being once unable to do anything he wanted to do, though he was always complaining.' In 1865 he made the attempt, already described, to leave off the opium. 'I cannot recollect whether it was before or after 1865 that he complained of pain in some small fatty tumours; but I know that for some weeks he continually complained of pain in these tumours, and nearly induced a surgeon to extract them. All this time he never mentioned his rectum. Then it began again, and he has gradually come to the deplorable state in which you see him. In listening

to him you must recollect that he has a very powerful imagination. One incident connected with an illness of my own he always relates, and probably believes, as having happened to himself.'

On the occasion of his first visit to me he was injecting fifteen grains of hydrochlorate of morphia into the rectum in twenty-four hours; was extremely shaky; in fact, was unable to hold a glass only half filled, without upsetting the greater portion of it. He was suffering from want of sleep and great prostration. He stated that he was unable to attempt any of his ordinary duties without a dread of breaking down—a feeling which was daily on the increase—unless he first of all injected into the rectum two or three grains of morphia; and that this he was frequently obliged to repeat twice or thrice at intervals of fifteen minutes or so, before he could recover confidence in himself. The bowels acted, as a rule, regularly without medicine; and he experienced no pain or difficulty in passing fæces: the stools were in all respects natural in appearance. The tongue was slightly coated. The pulse was quiet and regular. The urine normal in quantity, &c. The pupils were contracted to rather less than one-half.

He was very anxious to try and reduce the daily quantity of opium, and it was agreed that the reduction should be gradual—perhaps gr. $\frac{1}{4}$, or gr. $\frac{1}{2}$ of the morphia in the course of a day or two.

On April 23, 1870, he had reduced the dose some two or three grains, without feeling any other bad effects than want of sleep, to procure which chloral hydrate, half-a-drachm at bed-time, was prescribed.

(I may here add, that from this date he always took chloral in varying quantities at bed-time; during the night, if he was restless; and during the day, if the pain in the rectum was severe.)

The patient being afraid that the chloral would upset his stomach, I suggested that he should use it by the rectum, and ordered 15 grains for a dose, which he described as acting instantaneously.

On May 2 the morphia had been reduced to four or five grains in twenty-four hours; the chloral enabling him, as he expressed it, 'to bear pain, not to take pain away.' He also had reduced his allowance of alcohol, which of late he had been taking in excess. The chloral, whether taken by the mouth or by the rectum, had the effect of making his eyes, and face generally, very red.

In the course of the month he had substituted laudanum for the morphia, and on June 10 he was using tinct. opii ʒvij only. At first the change appeared to have a beneficial effect, and he was easier, but not comfortable. But on June 10 I found him sick and purged violently, with a dirty, coated tongue; low, nervous, and very tremulous. At his urgent request I sanctioned a return to the morphia, and he commenced again with gr. vj. Ordered calomel gr. iij in pulv. for the sickness. On June 22 he was in much the same state, but was advised to keep down the poison to gr. vj if possible. He was ordered a mixture of strychnia, sulphuric acid, and quinine.

July 4.—His appetite had failed entirely, and it was with great difficulty that he took the light nourishing diet ordered, consisting of milk, eggs, Liebig's extract, with two or three glasses of sherry. It was but rarely that he could eat meat. The dose of morphia was about 4½ grains. He complained, too, of a feeling of utter weakness.

20.—He wrote to me that he had been going on very painfully, totally unable to work, and was now so shaky, that until he had taken some wine he could not write, nor could hardly get his fork or glass to his mouth. He had, however, recovered his appetite. The dose of morphia remained at gr. iv, but the chloral seemed rather to lose its effect.

Sept. 6.—He had returned to morph. gr. vj, and was unable to transact any pressing business without a pint of sherry. The tremulousness of the hands and knees distressed him greatly.

23.—He was 'existing on four grains.' I found out incidentally that he had increased the dose of chloral to a drachm, repeated at irregular intervals during the twenty-four hours.

He was somewhat improved in general health, and so, advising him to abstain as much as possible both from opium and chloral, I took my leave.

On March 15, 1873, I received a letter from my patient, in which he stated that during the past two years and a-half he had made several attempts to do without opium, but always with the same result, viz. purging, vomiting, inability to eat, and utter prostration, accompanied by that unbearable pain in the rectum. 'I am ill, and have no power to work, or to make the go-ahead speeches which gained me my living. I have always had a horror of stimulants, but a pint or so

of sherry gives me ease, and chloral gives me sleep; the last taken in very small doses, 7, 10, 15, 20 grs., never exceeding 30 grs. in the twenty-four hours. This enables me to keep down my morphia, but the whole of my life is a misery. The curious part of it is, that my brain seems untouched. My sensations are hard to describe, not sickness, or absolute pain, but general, all-over, utter discomfort.'

He was by this time taking large quantities of alcohol (sherry, brandy, and champagne, daily). The morphia varied from 10 grains to 20 grains in the day and night. He was unable to transact any business until after lunch, at which meal he drank, as I found out from his friends, frequently as much as a bottle of sherry. I prescribed a mixture of tinct. cannabis indic., tinct sumbul, and ether, with an occasional dose of Pullna water in the morning. I only saw him on this occasion, as he was leaving town for a time.

May 9.—Found Mr. —— suffering from dyspepsia, induced chiefly by excess of alcohol, and ordered a mixture of bicarb. of soda, hydrocyanic acid, and bismuth.

Nov. 14.—He had another attack of dyspepsia, and it appeared from his friends' account that he usually drank a bottle of sherry at lunch; about the same quantity at dinner, in addition to brandy and milk at 8 A.M. The dose of morphia had now reached ʒj regularly, besides frequent injections of chloral (gr. xv.). He was strongly urged to reduce the wine, &c. The stomach and intestines were much distended with flatus; so the hydrocyanic acid and bismuth mixture, with the addition of liq. strychn. ♏v, was ordered three times a day. The symptoms were relieved, but on

Dec. 31 I found him as bad as ever again. He confessed to three wine-glasses of brandy daily before 10 A.M., and acknowledged that he had made no reduction in his consumption of wine. His eyes were very red, and his face flushed from chloral. Dose of morphia as before. I impressed upon him the danger of his present mode of living, and succeeded in frightening him. His daily diet was written down for him, and exercise ordered more frequently than heretofore. (He was a great reader, and averse to leaving his chambers, unless with some definite object.) He took a mixture of rhubarb, strychnia, and magn. carb., attended to the directions, and in three weeks had recovered.

Nov. 13, 1874.—Found Mr. —— again suffering from epigastric pain, and flatus—costive bowels—a brown coated tongue, and occasional vomiting after solid food. He con-

fessed to occasional excess in wine, &c., after a hard day's work. In addition to the old mixture he was ordered pills of pil. hydrarg., and pil. rhei comp., for one night, and a wine-glass of Hunyadi janos water in the early morning, so long as the bowels remained inactive. He was slightly jaundiced three days later, but no enlargement of the liver was evident, and in a week he left town on business, improved in health.

On Dec. 4 I was sent for to see my patient, who had been seized two days previously with pain in the right side, which had gradually become more and more severe. The attack was attributed to the fact of his having got wet through while returning home from dining at his club. He had had no rigor.

I saw him at 5·45 P.M., and found him suffering from acute lancinating pain in the lower part of the right chest; tenderness over the lower one-fourth of the right lung. The liver was not tender to palpation, nor was it increased in size. The right chest was dull on percussion over the lower one-fourth, and comparatively so as far as the inferior angle of the scapula behind, and in front as far as the nipple. Fine crepitation of pneumonia was audible all over the affected part, with loud bronchophony at the base: no friction sound was detected. Sonorous rhonchi were heard over the upper part of this lung, and occasionally in the left. The respirations were quick, shallow, and jerky, and he almost shrieked with pain at each inspiration. Pulse 120, bounding. Temperature 101·8°. Ordered a poultice over the painful part, of linseed and mustard, with a mixture containing 10 drops of antimonial wine, with nitric ether, tinct. scillæ, and vin ipecac., every three hours.

10·30 P.M. Found him in his night-shirt only, sitting in a water-closet with the door open, at the top of a stair-case which communicated directly with the outer air, and consequently exposed to a draught of extremely cold air. His attendants tried to dissuade him from using this closet, but he persisted. When he returned to his bed, I found the pulmonary symptoms *in statu quo*; and as the bowels had not acted, he was ordered a black draught. He had only taken one dose of the mixture.

Dec. 5, 11·30 A.M.—During the night he administered to himself, in his usual way, three doses of chloral hydrate, about gr. xv in each, and once or twice had recourse to the morphia injections, but how much he took his attendants

were unable to inform me. The eyes were red, the pupils much contracted, and the conjunctivæ almost scarlet from congestion; very drowsy; could with difficulty be roused to answer questions. With each inspiration he uttered a sharp cry, followed by a prolonged moan. Very *slightly* jaundiced. Bowels acted three times; motions fluid and dark. Crepitation audible, but rather coarser than yesterday; the pneumonia had not extended. Pulse 120, compressible. Respiration 45, shallow and jerking. Temperature 102·8°. He was very restless, and it was with great difficulty that he was kept covered with the bedclothes, or that the poultice was retained in its proper position. He had refused medicine during the night, so I ordered a mixture of ammonia, ether, and squills, to be taken whenever he could be induced to swallow it: but that it was only to be a secondary consideration. Beef-tea, with champagne or brandy, he had taken well, at short intervals, during the night.

6 P.M.—Much weaker, can scarcely articulate a word: the redness of the eyes had passed off; the pupils were less contracted. The nurse was ordered to push the stimulants, and feed him with beef-tea, brandy or champagne, at intervals of not less than twenty minutes.

11·30, P.M.—Resp. 65. Pulse 128, very compressible. Temp. 101·8°. Groaning incessantly, with an occasional sharp cry, as if of pain; cannot speak. The bowels had acted twice, loose and dark coloured; feet, face and hands, cold. Hot bottles were applied to the feet, and plenty of stimulant administered by myself, which he took readily; but in spite of this, and that he had taken since 7 P.M. half-a pint of strong beef-tea; ¾ pint of champagne, and 3 dessert spoonfuls of brandy; he grew colder, and decidedly weaker, so at

12, midnight, I determined to inject, per rectum, 2 grains of morphia, which he could just explain, by signs, was his usual dose. Within fifteen minutes, the pulse improved in quality; the extremities, all save the cheeks, became warm; but the respirations continued rapid as heretofore. I left a little before 1 A.M., leaving orders that the dose of morphia was to be repeated, if he became cold, in two hours. This was done, and, according to the nurse's report, with similar good results. He again relapsed, and I was sent for, and arrived on

Dec. 6, at 5·45 A.M.—Pulse 128, if anything, rather stronger, than at my last visit. Respiration 65, shallow;

incessant groans, and a frequent, sharp cry with inspiration. Air entered the upper part of the lungs fairly; too prostrate for further examination; an occasional mucous rattle in the throat. Has had two or three profuse cold sweats; passed water freely, in the bed, since 12 midnight. Stomach and intestines distended with flatus. Has taken nourishment, &c., well, but the medicine, at my direction, was not pressed.

6.15 A.M.—An injection, per rectum, containing beef-tea, ℥iss, brandy, ℥ss, and morph. gr. ij, was administered; but no response to the stimulant resulted.

6.30 A.M.—Passed water; a tea-spoonful of brandy in a little warm water, by the mouth. Great distention of the bowels and stomach by flatus, and evidently, from his gesticulations, some pain.

6.45 A.M.—Beef-tea enema, with 2 dessert-spoonfuls of brandy. The pulse had failed considerably during the past half-hour, and a cold, clammy sweat, had come on.

7 A.M.—Sinking. Pulse running, hardly to be felt. Brandy, and a little strong tea, by the mouth.

7.20 A.M.—An egg beaten up, with brandy, per rectum. Pulse 144, running. Cold sweat. Breathing more laboured. Respiration shallower; cheeks and hands very cold; throws his hands out of bed as fast as they are covered up.

He lingered, apparently conscious, to the last, until 10.40 A.M., when he died quietly, without any movement.

When summoned to attend Mr. ——, at the commencement of his fatal illness, I took the precaution to apply to his druggist, in order to discover how far his statements, as to the quantity of morphia consumed, were correct, and I was informed that, on Oct. 19, 1874, he was supplied with ℥vj of hydrochlorate of morphia; again, on Oct. 19 and 31, Nov. 13 and 23, 1874, with a like amount, and that the supply had been maintained, at intervals of a month or so, for some years, although latterly it had greatly increased. Further, that some five or six years previously Mr. —— had taken cannabis indica in large doses, but without effect, so far as relieving the pain in the rectum was concerned; and that up to six months ago he was in the habit of taking frequently scruple doses of bromide of potassium.

His account, therefore, of his consumption of morphia, was strictly accurate, but he withheld from me the fact that he had employed the Indian hemp and the bromide of potassium.

Remarks.—That a person should be able to withstand, for

so many years, the effects of morphia without symptoms, would not be extraordinary in the history of opium-eating. In this instance, doubtless, the fact of the drug having been always taken by the rectum may, in a great measure, account for the prolonged immunity from the evil consequences which attend its frequent introduction into the stomach. But that a man should, at various intervals of time, have recourse to cannabis indica, alcohol, bromide of potassium, and chloral hydrate, in excessive doses, and that latterly he could take the three last named, in addition to morphia, without cerebral disturbance, or the functional derangement of the viscera, certainly is a remarkable fact.

Dyspepsia, together with functional derangement of the liver, occurred, at irregular intervals, during the last year or so of his life; but was, as it would appear, due rather to excessive indulgence in alcohol than to any deleterious effects of the opium. For nineteen years he had been addicted to the use of this poison, in steadily increasing doses, and yet his health did not, until the last four years or so, appear to have suffered. It was only when he attempted to break himself of the habit that untoward symptoms manifested themselves.

His sensations, during the whole time, corresponded precisely with those described by De Quincy, with whose writings, on the subject of opium-eating, he was thoroughly acquainted. More especially, my patient dwelt on the feeling of utter depression, the violent purging, vomiting, and severe cold in the head, which attended any great reduction of his daily quantity of morphia.

The excitement of the vascular system, accompanied by exaltation of the nervous functions, which are the first effects of opium, are rendered permanent so long as the use of the drug is continued. Any sudden reduction of the habitual dose produces a corresponding depression both of the vascular and nervous systems, the result being the feeling of utter worthlessness described by De Quincy and my own patient. The first effect of morphia, as described by Hermann, is to retard the action of the heart, and to produce a strong contraction of the small arteries. These phenomena, however, pass off after a time, and are followed by corresponding relaxation of the vessels. It is obvious that repeated doses of the drug maintain this state of arterial contraction, and increased blood-pressure, so long as the morphia is continued. If a person, accustomed to the use

of morphia for many years, suddenly reduce his dose to any great extent, or abstain from it entirely, the disturbance produced by sudden relaxation of vessels which have been kept so long in a state of contraction, must of necessity be serious; a catarrhal condition of the gastro-intestinal mucous membrane follows, and hence the vomiting and diarrhœa which attends each attempt to abstain from the poison.

De Quincy's maximum dose in twenty-four hours, was, if my memory serves me aright, 8,000 drops of laudanum, equal to about 53 grains of morphia; in the present case, 20 grains were rarely, if ever, exceeded; and on this ground the patient always based his hope of many years of life before any evil consequences could ensue.

The beneficial effects which followed the administration of morphia, on the night of Dec. 5, described above, as shown by the rapid recovery of temperature in the extremities, and improvement in the quality of the pulse, were most instructive. It might, however, be objected that the application of this stimulant was deferred until too late; that the patient should not have been allowed to become thus cold and depressed. But when the facts of the great and persistent contraction of the pupils, and the hyperæmia of the conjunctivæ from the use of chloral hydrate, are taken into consideration, it will, I think, be conceded that recourse to morphia would have been unadvisable in an earlier stage of the disease.

The case would also illustrate, if further illustration were needed, the rapidity and certainty with which acute disease runs on to fatal termination in those who are addicted to the abuse of stimulants. The patient, in this instance, was a strong, well-made, proportioned man, of sound constitution; and, as far as one can judge, there was no reason against his ultimate recovery from an attack of pleuropneumonia so limited in extent, had he not been for years in the habit of taking large quantities of morphia, alcohol, &c. He died because it was impossible to give him stimulant sufficient to enable him to contend with his malady.

XXXII.—*Case of Acute Necrosis, in which the Whole Shaft of the Ulna was removed.* By RICHARD BARWELL. *Read March* 12, 1875.

ON June 25, 1874, Mr. Cope, of Croydon, brought to me Miss F . . . . , æt. 7, and gave me the following history:—On May 16 he was asked to see the child, who three days previously had fallen, and was supposed to have sprained her arm. Mr. Cope found the limb distorted, swollen, and painful, and with much difficulty made out a fracture of the ulna. He placed the limb in plastic splints; but inflammation, with much swelling, supervened, so that in three days one of the splints had to be removed. There was phlegmonous inflammation in the neighbourhood of the elbow, and an abscess formed, which discharged itself on the 24th. After this she went on well till June 8, when she again fell down stairs. Phlegmonous symptoms again showed themselves, and there appeared to be injury about the deep parts—a tendency to abscess showing itself about the injured parts. The child was in an unsatisfactory condition, and on the 25th I was, as above stated, consulted. I found the forearm on the inner side along the subcutaneous ridge of the ulna was swollen and tender, the tumefaction being deep and doughy. The skin was reddened, not uniformly, but in patches, connected together irregularly by smaller blots of a less deep colour; it was also hot.

Constitutional disturbance was, when I saw her, pretty considerable. Temperature in the mouth 101·2°, yet she was able to travel from Croydon to my house. She was said, however, to get much more feverish in the evening.

I diagnosed acute necrosis of not the most rapid form, and, with the concurrence of Mr. Cope, explained the necessity for energetic treatment—the probability, or almost certainty, that the bone was dead or in the process of dying.

June 26.—At the patient's house, chloroform having been administered by Mr. Cope, I cut down to the ulna, along rather more than its middle third. The bone felt rough and dead. A few drops only of pus came away, and this from intermuscular spaces. As far as I could see, a curdy matter, but no pus, lay beneath the periosteum. Some smart bleeding was

immediately checked by a pad of lint in carbolic acid, secured with a bandage.

The wound rapidly granulated and filled, the child's health becoming greatly better.

July 29.—Mr. Cope brought the child to me again. The wound was healed save four large sinus mouths—one at the upper angle, one at the lower end, and two near the middle of the wound. These openings were surrounded by peculiarly prominent rings of granulation. A probe passed into them led direct, and by very short transit, to dead bone. Along the course of the ulna deep hard swelling could be felt, as though the bone itself were enlarged. Thus it was diagnosed that the greater part of or all the ulna shaft was necrosed, and had become enveloped in a more or less complete case of new periosteal bone.

Aug. 4.—Chloroform being administered by Mr. Cope, I first applied the Esmarsch bandages, and then cut deeply in the old line of incision, and somewhat beyond it, both upwards and downwards. This exposed along nearly its whole length a case of fresh bone, almost enclosing the dead shaft. The tube was nearly complete, a small opening in its upper part, a rather large one below, and about its middle portion an irregular rather long chasm, permitted views of the necrosed ulna. In the absence of bleeding, the appearance of the white necrosis peeping out from the pink case of new bone, presented a beautiful and characteristic appearance.

In order cleanly to divide the dead from the living tissue, I used a blunt, rather narrow periosteum-chisel, chiefly as a spatula, to effect separation, but also as a lever; evidently, however, it was impossible, unless by cutting away much of the new formation, to lift the dead bone horizontally from the cavity, and an attempt was made to draw it out lengthwise; this was fortunately successful, and I now beg to show you the shaft separated from both epiphyses, which was thus pulled out of and left behind, a nearly perfect tube of fresh undisturbed bone.

The wound was dressed lightly with lint in carbolic acid lotion, and a bandage just tight enough to restrain any tendency to oozing. During this operation less than half an ounce of blood was lost, and no subsequent bleeding took place.

The case, Mr. Cope told me, went on perfectly well, and

on the first few days of October, I being at Croydon for another case, saw the patient again. The wound had healed, there was no distortion in any part of the limb, and the movements, though restrained, were perfect.

On Jan. 14, 1875, Mr. Cope was good enough to write to me thus:—

"The case has gone on without a bad symptom, the patient's health has rapidly improved, and the limb now is a most useful one. There is perfect use of both elbow, wrist, and hand."

Remarks.—Inflammatory death of a bone may be more or less rapid, and yet its less severe form continue to deserve the name of "Acute Necrosis," and such I consider the *status* of the case just narrated. All surgeons will, like myself, have seen more rapid forms of the disease. Nevertheless, taking this case as an example of the malady, I would beg to make some concise remarks on its nature and treatment.

In the first place, as to its name. I prefer to call the disease acute necrosis rather than acute periostitis, because I think that in giving it such nomenclature as shall confine the notion of its seat to the outer membrane of bone would indicate a false idea of its seat and extension. It is certain that all the net-like vessels and membranes of the Haversian canals, &c., are continuous with the periosteum on the one side and with the endosteum on the other, and the affection of these membranes must be coextensive with the subsequent death of the bone. A periostitis pure and simple will produce death of the surface. An affection involving the Haversian vessels more deeply produces necrosis equal in thickness to the depth of the inflammation. When the whole bone is to die, all the Haversian systems—viz. those connected with both the periosteum and the endosteum, as well as the membranes themselves—must be involved.

Another question of some pathological and clinical interest is the production of pus beneath the periosteum. Chassaignac, whose paper on periostitic abscess is well known, believed suppuration in that place to be the essence of acute necrosis; but this opinion has not received much confirmation, and is, I believe, contradicted by facts. The material which, in the earlier phase of the disease, is found underlying the periosteum is a curdy lymph, intermixed with occasional blood-clots. One singular point which I have not seen mentioned anywhere is, that before pus has formed beneath the periosteum

it will be found among the soft parts, at first diffused in the inter-muscular space. Pus beneath the periosteum shows that incision has been too long delayed.

And this leads me to speak of the treatment which may, I believe, be almost summed up in the words 'early incision down to the bone.' Afterwards stimulation, both dietary and medicinal, will be necessary; but without incision all such treatment will be nugatory. The difficulty, however, lies in early recognition of the disease with such certainty, as shall, to his own mind, justify the surgeon in cutting thus widely and deeply, and that without any expectation of letting out a quantity of matter or removing diseased tissue. In order to lighten, if possible, this difficulty, I would wish to call especial attention to the early signs of the disease: the age of the patient; pyrexia usually setting in suddenly; deep-seated and severe pain, increased on movement. The sort of swelling which is in all the early stages—uniform, deep, and doughy, and gives the idea of a deeply-seated œdema—running in the course of the bone; in this phase of the malady the part will not pit at all, but it imparts to the surgeon an impression as though, if he could get his finger deep enough, he would produce pitting.

Again, as to colour; in the early stage the red patches are mottled on a normally coloured ground, along the course and direction of the bone; they are pink rather than dusky, and do not disappear upon pressure.

Such signs, if fully recognised, not only warrant, but demand incision. If the surgeon dally with hot fomentations and leeches until the deep œdema has approached the surface; if he wait until the red patches become dusky and run together, and till the whole limb is hot, red, tense with a glazed and polished surface, he will have waited too long.

XXXIII.—*A Case of Disseminated Sclerosis of the Brain and Spinal Cord.* By THOMAS BUZZARD, M.D., *Read April* 9, 1875.

A PATIENT suffering from this disease was exhibited. The man, a house painter, æt. 33, but looking many years older, had suffered once from colic, and had a marked blue line on his gums. He was wheeled in a chair to the upper part of the room, and beside him was placed another

man affected with paralysis agitans *; and Dr. Buzzard then proceeded to compare the symptoms by which the two diseases, often confounded, could be distinguished.

The patient with sclerosis, whilst seated and with his limbs in repose, showed no signs of tremor in any of his muscles; whilst in the other man there were constant rhythmical movements, which could be seen even at a distance, and his hands maintained the position characteristic of paralysis agitans, the thumb being applied to the forefinger, as in taking a pinch of snuff or rolling a cigarette. The head of the latter patient was projected stiffly forwards; the chin of the former rested easily upon the upper part of the chest, for the reason that an effort to hold the head upright caused violent agitation of the muscles at the back of the neck.

Asked to rise, the patient with disseminated sclerosis made at first several ineffectual efforts, his whole body being thrown into violent tremors, the feet being lifted from the ground when evidently he wished to stand upon them; and he attained at last the standing position, and took a few steps only with the help of an attendant. The patient with paralysis agitans rose without increase of tremors, and walked easily, but with a hurrying gait, the body bent forward. In answering questions, the articulation of the patient with sclerosis was observed to be greatly embarrassed, the words being clipped and uttered in jerks, syllables being often repeated three or four times, so that it was very difficult to comprehend him.

The patients were then removed, and Dr. Buzzard gave some details of the case of cerebro-spinal sclerosis. The man who was an in-patient of the National Hospital for the paralysed and epileptic had ordinarily enjoyed good health; but, about two years ago, he was attacked with shakings of the arms and legs. These occurred only when he wished to move the limbs, never when they were in repose. They increased, and, after six months, he had to give up work, but remained able to walk until six months ago. For the first six or eight months of his illness, he suffered only from the shakings; but then he began to have attacks of giddiness, with difficulty of articulation, and found that he could not read many lines without confusion in the type. At the same time he began to experience numbness in the lower extremities, which still continued. The giddiness he had

* For the opportunity of showing the patient affected with paralysis agitans Dr. Buzzard was indebted to the courtesy of his colleague Dr. Bastian.

not felt for the last three or four months. At present there was some, but not much, deficiency of power in all four limbs. There was slight dulness of sensibility in his lower extremities, but no impairment of the functions of the bladder or rectum, and, it was alleged, no loss of sexual power; nor was there loss of muscular sense. He did not suffer from flying pains like those of locomotor ataxy, but he was subject to pain at the top of the head occasionally. The sense of smell was intact, the sight somewhat enfeebled. There was no paralysis of the third, fourth, sixth, seventh, and eighth nerves. The action of the masticatory muscles was a little irregular, and there was tremulousness of the tongue. His wife thought him as intelligent as ever; but, as he could not speak, except with difficulty, or read without embarrassment, or rise to his feet without help, he passed his time in a chair, doing nothing, and his face wearing an aspect of hebetude. If he took a newspaper, he would read perhaps twenty lines fairly, but then he became confused, skipped several lines, or returned to one already read, got into great confusion, and was forced to give over. The ophthalmoscope showed dark greyness of the optic discs, the vessels proportionate and not tortuous; the outlines of the discs not sharply defined.

In his remarks, Dr. Buzzard mentioned that, though the anatomical characters of this disease had been pictured by Cruveilhier nearly forty years ago, and about the same time by Carswell in this country, and although since then many cases of the affection had been recorded—amongst others, by Türck, Frerichs, Valentiner, Hasse, Niemeyer, and Leyden—it was certainly to Dr. Charcot of Paris that the credit was due of differentiating the disease from other forms of paralysis, and especially from paralysis agitans. This had been done during the last few years, and the diagnosis had been made so clear that it was now almost impossible to understand the cause of any confusion in the two disorders, whose pathology, he might add, differed completely. Whilst the symptoms in disseminated cerebro-spinal sclerosis were always dependent upon the presence of scattered patches of indurated and condensed connective tissue throughout the brain and spinal cord, there was no constant lesion to be found in those who died with paralysis agitans. Dr. Buzzard added that he did not bring forward the case as a pathological curiosity, but with the hope that, the more widely diffused was the knowledge of the peculiar features of the disease, the more likely it would be that valuable information

would be gleaned as to its earlier stages. In hospital practice it was only seen when confirmed, and then it was too late to treat it with any hope of success.

As regards treatment, as the patient had had to do with lead, and there was a blue line on his gums, iodide of potassium was being given to him, not, however, with much hope that it would do good. A trial was also being made of the Russian needle-bath, which had appeared to be of some service in a case of the kind.

XXXIV.—*Case of Chronic Lead Poisoning. Acute Diffuse Paralysis. Suppression of Urine. Death.* By THOMAS STRETCH DOWSE, M.D. *Read April* 9, 1875.

I HAVE ventured to bring the clinical records of this case before the Fellows of the Society to-night, because I think it is an exceptional one, and worthy of some discussion.

The action of lead upon the various nervous centres must at all times be replete with interest for many reasons. In some instances it attacks trophic nerves, and gives rise to sub-acute inflammation of joints. In others the solar and abdominal sympathetic plexuses are primarily and solely involved, producing tonic spasm of the involuntary muscles of the bowels. Again, certain spinal centres alone come under its influence, then we have palsy of the extensor muscles of the extremities. And lastly, but I think most rarely, we find the encephalic functions materially disturbed. In the following case we have a man in the prime of life (æt. 26)—in the enjoyment of robust health—following the occupation of a painter, suddenly seized with agonising pains in the abdomen, soon succeeded by palsy of the extensor muscles of the fore-arm, and again in succession by palsy of the extensor muscles of the legs. His family history is obscure, but it seems that seven years ago he had an epileptic fit, and upon more than one occasion has suffered from painter's colic. When I first saw him, on Oct. 22, ten days after his sudden seizure, he gave me the idea of a man suffering from progressive insane paralysis. The intellect was obtuse and confused, and although he tried to answer questions he failed; the eyes were dull and hazy; the arms and fore-arms were partially raised, and the hands dropped listlessly at the wrists; he could not raise the legs from the ground without great effort. The tongue was dry, glazed,

and protruded with difficulty. The teeth were irregular and covered with tartar; the gums were spongy, and the sulphide of lead line was marked most plainly. There was partial retention of urine; it was highly albuminous; of specific gravity 1020. The respiration was puerile, tracheal, and hurried, 40 per minute. Pulse, 100.

Oct. 23.—This morning is very drowsy. He tries to protrude the tongue; he has less voluntary power than he had yesterday, and there is tendency to subsultus. Urine drawn off to the extent of 20 oz. Resp. 32; pulse, 100; m. temp. 102°; e. temp. 103°.

24.—Is much worse. There is violent agitation of every part of the body, but more particularly of the upper extremities, which are jerked about in the most inco-ordinate manner. The fore-arm is at times rapidly flexed upon the arm, and the flexor tendons stand out like tightened cords. There is some trismus, which occasions difficulty in depressing the lower jaw. There are bilateral spasms of the facial muscles, more marked on the left than on the right side. The lower extremities are now as rigidly extended as the upper ones are flexed. There is complete cutaneous and muscular anesthesia of the whole body, from a line drawn on a level with the alæ of the nose to the soles of the feet. There is no muscular response to the intensified induced current of a double-celled Stohrer's battery below the line of demarcation just mentioned, but above this the muscles act readily. He is becoming much more lethargic, and there is almost complete absence of objective cerebral consciousness. The skin acts freely, and it has the odour peculiar to acute rheumatism. There is suppression of urine; only about 4 oz. has passed into the bladder during the last twenty-four hours. There is no apparent palsy of ocular muscles. Pulse, 120; resp. 32; m. temp. 102·4°; e. temp. 101°.

25.—During the night he has been subjected to repeated attacks of tetanic spasms, sometimes lasting for ten or fifteen minutes. The trismus is becoming more aggravated. He still endeavours to protrude the tongue when asked, but always fails to do so; it is dry, and of a mahogany colour. Only 1½ oz. of urine has been secreted in the twenty-four hours. The sides of the abdomen, chest, and back, are covered with a maculated roseolar eruption disappearing upon pressure. Pulse, 100; resp. 36; m. temp. 101·2°; e. temp. 105°.

26.—Is much more lethargic and cyanosed, nearly comatose. The convulsions are frequent, but more clonic than

tonic in their character. Pulse, 100; resp. 28. Temp. at 10 A.M. 106·2°. At 2 P.M. he became quite comatose. Resp. 40; pulse, 140; temp. 108·4°. At 2.45 P.M. temp. 108·8°. At 3 P.M. 109·9°. At 3.15 P.M. temp. 110°, when he died. The temperature rather suddenly decreased after death; by 4 P.M. it was down to 105. For some time previous to death the respiration was essentially diaphragmatic, the intercostals not raising the thoracic wall at all.

Post mortem twenty-four hours after death. Cadaveric rigidity well marked in the lower limbs. The bellies of the flexor muscles of the calves stood prominently forward as hard as iron, whilst those of the upper limbs were flexible. The lower jaw was rigidly fixed. Upon removing the calvarium a large quantity of pent up blood made its escape from the engorged sinuses. The calvarium itself presented three small smooth fossæ just posterior to the left fronto-parietal suture at its vertex, and the whole course of the suture was rough and jagged. Over the surface of the dura mater, and corresponding to the fossæ of the calvarium, were small cystic elevations containing fluid. When the dura mater was removed a firmly organised clot, evidently ante-mortem, was found partially adherent to the wall of the straight sinus. The arachnoid membrane had not undergone change, but the vessels of the pia mater were engorged with blood. Between the pia mater and the substance of the convolutions over the left parietal and occipital lobes there was some recently extravasated blood. When the hemispheres were sliced through on a level with the corpus callosum, the vessels presented numerous vascular points from engorgement. The ventricles were free from fluid. The vessels of the velum interpositum gave evidence of extravasation on its under surface. The central motor tract showed no change to the naked eye except in the centre of the left corpus striatum, where there was a small cavity capable of holding a couple of ordinary shot. At the base of the brain no plugging of the vessels could be detected. The thoracic viscera were healthy. The liver was large, but both it and the spleen appeared to be healthy. The kidneys were congested, of a deep purplish red colour, but the capsules could be separated without tearing the cortices.

I am indebted to my friend Mr. W. B. Kesteven for the following miscroscopical characters of the brain and spinal cord, and to Mr. Howell Williams, who examined it quantitatively for lead.

The spinal cord throughout showed evidence of extreme congestion. The vessels were dilated and loaded with blood globules, and the perivascular spaces were well marked. Ascending upwards to the cervical region, the presence of colloid bodies and of grey degeneration became increasingly manifest.

In the medulla oblongata, more especially about the nuclei of the hypoglossal and auditory nerves, these morbid appearances became still more striking. Grey degeneration presented itself throughout this part of the nervous centres as abundant miliary sclerosis, with scattered colloid bodies.

The brain substance, upon analysis, was found to contain about $\frac{1}{250}$ gr. of lead in each drachm. The spinal cord a little less.

The extensor muscles were found to contain lead.

XXXV.—*Aneurism of the Internal Carotid within the Skull diagnosed eleven years before the Patient's Death. Spontaneous Cure.* By JONATHAN HUTCHINSON. *Read April* 9, 1875.

MRS. S., the subject of the present case, first came under my care on March 8, 1861, at the Moorfields Ophthalmic Hospital. She was 40 years of age, thin and extremely pale. The upper lid of her left eye drooped so as almost to cover the pupil, and when looking straight forwards there was slight convergent squint. The squint was found to be due to complete paralysis of the external rectus; she had not the slightest power of carrying the eye outwards. The superior, inferior and internal recti were all weakened, but none of them paralysed. The action of the superior oblique appeared to be perfect. Her pupil was fixed and twice the size of that of its fellow, and the function of accommodation was almost if not completely lost. All the muscles in the right orbit enjoyed their perfect function and with this eye she could read 'brilliant.' Thus it will be seen that we had evidence of complete paralysis of the left sixth nerve, with incomplete paralysis of all the branches of the third on the same side, and probably of the ocular branches of the vaso-motor also. The history given was that the drooping of the eyelid had been first noticed, together with some dimness of

sight, about a year ago, and that nearly at the same time she had experienced a great aggravation of habitual headaches.

For ten or eleven years she had been liable to bad headaches, but about the time mentioned they became much worse and she experienced a 'dreadful throbbing' in the *right** temple. These attacks of throbbing would sometimes last for two or three days together, and entirely prevent her sleep. She also mentioned as a prominent symptom 'such a beating under my ears.' Nothing could be found in the

Internal carotid laid open. Inner side.

history of her case which materially supported the suspicion of syphilis. She was thin, and her hair was scanty, but she had no special symptoms. She had borne but one child, and this was twelve years ago. Her child died suddenly when eight months old, but nothing conclusive could be ascertained as to the cause of its death.

A fortnight later than the above notes I find it stated that she could not feel quite well in the skin of the left forehead, and two months later the pupil of the unaffected eye was

* I am obliged to retain the statement that the throbbing was felt in the *right* temple, because I find it in my notes, but I cannot help suspecting that it is a mistake, and that the word must have been intended for *left*.

the larger of the two. The left was oval, and all but motionless, nor did it act when light was thrown on the other eye. She had double vision when tested with coloured glasses, but had never from the beginning noticed this symptom spontaneously.

From this date until her death, eleven years later, Mrs. S. remained under occasional observation. Within a few months of the time of her admission the paralysis of the branches of the third nerve became complete, and her eyelid drooped so as to quite cover the eye. All the recti were absolutely

Aneurismal sac. Outer side.

paralysed, but her superior oblique still remained unaffected. The pupil of the left eye was always absolutely motionless, that of the right being the smaller of the two when exposed to a bright light, and the larger when the light was only dull. There was never any disease of the fundus of the eye and, excepting that she had lost accommodation, she could see fairly with it; the pupil always dilated well and quickly under the influence of atropine. The *portio dura* remained perfect, but she had some symptoms which indicated implication of the fifth. Thus she complained of 'such a drawing, numbing and tingling feeling' in the left cheek, side of tongue, jaw

and eyelid. The top of her head also she said seemed numb, but she had no actual pain in these parts. Although, however, she had no severe neuralgia in the parts supplied by the fifth, she suffered extremely from internal headache, and was often kept awake whole nights by the throbbing. I am ashamed to have to record that my notes do not contain any reference to stethoscopic examination of the head, so that I cannot state except from memory the precise character of the bruit which we detected. I recollect, however, that there was a bruit, and my diagnosis of aneurism was so confident that we had on one occasion fixed the day for the ligature of the carotid. A medical friend whom I once took to see her expressed to her such a guarded opinion as to the prospect of advantage from that operation that she begged to have it delayed.

The chief question of diagnosis was between aneurism and pulsating tumour. After the consultation above mentioned the symptom of throbbing slowly subsided, the ptosis and paralysis of the recti muscles remaining however complete. She improved somewhat in health, although still very delicate, and from this time we ceased to entertain any question of operative treatment. During the following ten years she was at various times so ill from different maladies that she expected her death, and as she had made up her mind to allow me to examine her head, she used not unfrequently to send for me in order that I might see her latest condition. There was, however, nothing fresh to note as regards the orbit.

In Feb. 1871, about a year before her death, I discovered a large swelling in her abdomen which bulged to the right side and pulsated strongly. Its impulse was expansive, and could be felt over a considerable area, so that I could feel no doubt that it was aneurismal. Her pulse had remarkable intermissions, and these were felt very definitely in the aneurism. She complained much of pain in the lower left extremity, in connexion with the beating of the tumour. At this date her eyeball was quite motionless, but she could see fairly when the lid was lifted up. She still complained of occasional throbbing in her head, and said that she felt the intermissions of her pulse 'in her head.' Her abdominal symptoms had first begun in the previous September, 1870, with pricking pains in the abdomen, pains in the left leg and obstruction of the bowels; for some weeks at this

time she was confined to bed and could take no food, being nourished solely by enemata.

She died early in May 1872, having had a large abscess in the left iliac fossa in connexion with disease of bone from the pressure of the aneurism. At the post-mortem a solid aneurismal tumour, the size of a bantam's egg, was found occupying the inner part of the left middle fossa of the skull. It was shaped much like an egg, with its smaller end upwards, its larger end resting in close apposition with the adjacent bones. The internal carotid passed up on its inner side, and a well defined, smooth-edged aperture about as large as a number six catheter opened from its outer wall into the sac. The distal branches of the artery were pervious and passed up on the sides of the tumour. The optic nerve was in close apposition with the tumour, but there was no proof of its being injuriously compressed. The tumour rested on the Casserian ganglion, which appeared to have been flattened out by its pressure. The motor nerves of the eyeball are lost on the wall of the tumour. The tumour has not been laid open, but so far as examination with the probe reveals, it is solid; the probe only enters for about the eighth of an inch. The walls of the tumour, on its anterior and outer part, are partially calcified. That at the back is somewhat shrunk, under the influence of the spirit in which it has been kept.

P.S.—The specimen was deposited in the Museum of the College of Surgeons in May 1875.

XXXVI.—*Three Cases of Pyæmia caused by Acute Suppuration of the Middle Ear, and one of General Miliary Tuberculosis complicated with Pyæmia, caused by Chronic Inflammation and Caseous Deposit in the same Locality.* By HERMANN WEBER, M.D. *Read April* 9, 1875.

OUR late President, Mr. Prescott Hewett, has brought before the Society his experience on pyæmia in private practice. The pyæmic affections in the following cases originated likewise in private practice, although one of the subjects became afterwards an inmate of the German Hospital Sanatorium. While searching for the notes on the two first

cases to be reported, I came upon the case of general miliary tuberculosis complicated with pyæmia (Case IV.), and I venture to hope that the juxta-position of the latter case with the former will not be without interest.

Case I.

K. L., a girl, æt. 6, formerly in good health, was seized with sore throat and scarlet fever on March 10, 1854; the fever had already diminished, the left tonsil was scarcely more inflamed than the right, when, on the 14th, severe pain was complained of in the left ear; rupture of the tympanic membrane, and profuse purulent discharge from this ear on the 15th; rigor and excessively high pyrexia (106·8° F. or over 41·6° C.) on the 17th, and again on the 18th, 19th, 21st, and 22nd, with intervals of only slightly raised temperature. Pain in the left shoulder supervened on the 20th, abscess on the left forearm on the 21st, pericarditis on the 23rd, pleuritic effusion on 25th, abscesses over the right clavicle and right elbow on 26th and 27th, and death on 28th. The treatment had consisted in moderate doses of quinine and chlorate of potash, and cleaning of the ear with a weak solution of chloride of zinc (½ grain to the ounce).

Post-mortem Examination.—The left Eustachian tube was blocked up by thickened pus, the tympanic cavity filled with pus, the tympanic membrane ruptured; the mastoid cells almost unaffected; the internal ear free. The right ear normal. The upper part of the left jugular vein thickened, and harder than the corresponding right, with a thin firmly adherent layer of fibrin on the inner membrane; several of the small veins near the tympanum thrombosed. Fresh endo- and pericarditis. Pneumonia of the lower lobe of the right lung, with pleuritic effusion in the right cavity. Embolic infarctus in the spleen. A small abscess, the size of a hazelnut, in the right lobe of the liver.

Case II.

D. G., a healthy boy, æt. 7, had, at the same time, with two other members of the family, in Feb. 1852, a sore throat which was probably diphtheritic, though there was no false membrane, but only a small greyish patch on the right tonsil and uvula. The swelling of the tonsils was moderate; the pyrexia never excessive, the highest temperature being 102·2° F. (or 39° C.), with a pulse of 130. The local and general

symptoms had already much abated, when about the eighth day great pain in the left ear supervened, which was followed by rupture of the tympanic membrane and purulent discharge on the tenth day. Rigors set in on the eleventh, and frequently recurred at irregular intervals during three weeks, the temperatures on two occasions reaching respectively 107·2° and 107·3° F. (about 41·8° C.), and sinking rapidly under profuse perspirations to normal and somewhat subnormal figures. Abscesses formed during the same period on both arms, the left mastoid process, the left side of the neck, the left thigh, the right knee, and over the left sterno-clavicular joint.

The recovery was slow but perfect, with the exception of a very slight impairment of hearing on the left side.

The treatment had consisted at first in the internal use of chlorate of potash and the application of carbolic acid spray (1 to 50), and during the pyæmic period in large doses of quinine, i.e. from 60 to 110 grains per day, and port wine from 6 to 10 ounces daily.

Case III.

M. B., æt. 21, was seized with sore throat on Oct. 9, 1874, pain in the right ear, followed by purulent discharge from rupture of the tympanum on the 13th; rigor and profuse perspiration on the 15th. When he was admitted into the German Hospital on the 16th, Dr. Hessel, the resident medical officer (to whom I am indebted for the notes), found purulent otorrhœa and complete deafness on the right side, and rupture of the tympanic membrane; redness and swelling of the soft palate and tonsils. Temp. 104·6° F. (40·1° C.); pulse, 112. Received 3 grains of quinine three times a day.

On Oct. 17 and 18 the fever was rather less high, and on the 18th there was considerable epistasis.

On the 19th, towards morning, violent rigor and delirium occurred, with a temperature of 105° F.

At 3 P.M., when I saw him, the patient was in profuse perspiration, the temperature had gone down to 101·8° F. (38·7° C.), the pulse to 108; the purulent discharge from the right ear continued, together with complete deafness.

The ear was syringed with diluted carbolic acid, and the patient had internally three times a day 20 grains of quinine, 10 ounces of port wine, and took milk and beef-tea at short intervals.

On the 20th, early in the morning, the temperature was

normal; at 10, however, there was an attack of rigor, with a temperature 103° F. (39·45° C.), which rose to 105° F. (40·55° C.) by 2 o'clock, and receded to 102° F. (38·9°) towards the evening.

On the 21st, early in the morning, the temperature rose below the normal, but there was a fresh attack of rigor at 4 P.M., with a rise of temperature to 105°. Several pyæmic spots.

To receive 20 grains of quinine four times a day.

On the 22nd pulse and temperature were but slightly above the normal.

On the 23rd rigor at 1 P.M., with a temperature gradually rising to 103·8° F. (39·9° C.).

On the 24th rigor in the afternoon; abscess on the right fore-arm, and on the right mastoid process.

On the 25th pain and swelling of the left shoulder. 5 grains of iodide of potassium were added to each dose of quinine.

On the 26th a slight systolic bruit was heard over the apex, the fever being moderate.

After this date, when we had also the advantage of Sir James Paget's advice, there were still several slighter attacks of rigor, followed by the formation of fresh abscesses; but from the end of November the recovery was uninterrupted. The discharge from the ear ceased, and the deafness gradually disappeared.

Case IV.

Sore throat, leading to chronic inflammation of the middle ear, with formation of caseous deposit in the tympanum, and acute general tuberculosis.

A. T., a boy, æt. 10, belonging to a healthy family, had in the beginning of August, 1870, together with a brother of his, what was called an ordinary sore throat, to which both boys were occasionally subject. (He had at the same time herpes labialis.) The pyrexia was moderate, and ceased after three days; but while the brother remained quite well, A. T., a few days later, about the twelfth from the beginning, complained of pains in the right side of the throat, extending thence to the ear. At the end of three weeks, when I saw the boy, I ascertained that there was complete deafness in the right ear, the pain in the throat had ceased, and the fauces showed nothing unusual. The external meatus was slightly narrower on the right side than on the left, and the tympanic

membrane looked yellowish and prominent. There was but slight pyrexia, viz. 99·2° F. (about 37·45° C.) about 11 A.M., with a pulse of 90. The boy was thin and pale. I prescribed cod-liver oil and saccharated carbonate of iron, and urged a visit to Mr. Hinton for a careful examination of the ear, suggesting at the same time perforation of the tympanic membrane. This advice was not carried out, but the boy was taken with the rest of the family, first to Ostend, and thence to Switzerland, where he enjoyed tolerably good health. In the beginning of Nov. 1870, on his way home, he began to cough and became feverish; he was repeatedly sick without any sufficient cause, and when I saw him soon after his arrival in England, on Nov. 14, I found him very emaciated. Pulse, 130; temp. 103° F. (39·45 C.); severe headache, sleeplessness, constipation, and dry cough, were the principal complaints; crepitant rhonchi were heard at the bases of both lungs, and also occasionally at other points, but there was no distinct dulness. The ear was not any more complained of; there was no discharge, but the deafness was unchanged. There were no rose spots; the spleen was not enlarged; the stomach was rather retracted. Urine free from albumen.

10 grains of quinine, with 5 minims of diluted hydrochloric acid and 3 of liquor morphiæ hydrochloratis, were given every four hours, and cream of tartar lemonade as a beverage.

The cough became much less troublesome, and ceased after three days almost entirely. The temperature varied considerably and repeatedly in the course of every day; there were two distinct elevations to between 103° and 105° F. (39·45° to 40·55° C.), and two depressions to between 98° to 100° F. (36·7 to 37·8° C.), and the pulse likewise varied from 65 (with great irregularity) to 160 in the minute. While the lung symptoms receded the brain symptoms became more prominent, and the boy died on Nov. 26, the temperature having risen during the last hours of life from 101·5° to 106° F. (38·6° to 41·1° C.)

Post-mortem Examination.—Both lungs were studded with grey miliary tubercles; the costal pleura, the pericardium, the liver, the spleen, the parietal and intestinal peritoneum, showed likewise an abundance of tubercular granulations. The liver contained three small abscesses, from the size of a bean to that of a hazel-nut. The meninges of the brain were opalescent, and thickly beset with tubercles;

there was no difference in this respect between the two sides of the brain; the ventricles were dilated and filled with turbid serum; the meninges of the medulla oblongata and cervical portion of the medulla spinalis were likewise opaque, and contained many granules; the central canal of the cervical portion was rather dilated, and the surrounding tissue somewhat softened.

The substance of the right temporal bone was quite normal, but the tympanic cavity was filled with soft, yellowish white, commonly called caseous matter, which under the microscope consisted principally of small refracting granules of different sizes, fat globules, shrivelled cells, and some almost normal pus cells. The membrane of the tympanum was thickened and yellowish. The Eustachian tube was blocked up by the caseous matter described. The internal ear and the mastoid cells were almost normal.

Remarks.—With regard to this last (fourth) case it is evident that the tubercular affection of the brain was not produced by contiguity, but was part of a general tubercular infection, for the morbid conditions on the left half were quite the same as on the right.

The points of resemblance in all four cases are that an inflammatory affection of the fauces led by way of the Eustachian tube to inflammation of the internal ear, and that the products of this inflammation caused infection of the whole system; but there is this remarkable difference that the general infection caused by the three cases of acute inflammation and suppuration was pyæmia, while the general infection caused by the chronic inflammation and its results was acute general miliary tuberculosis combined with some pyæmic phenomena. In the three first cases the general infection followed very rapidly the primary suppuration, when the pus of the focus of infection was still genuine pus. In the fourth case, on the other hand, the general infection followed several months after the primary inflammation, when the product of this inflammation was no longer (whatever it may have been originally) genuine pus but caseous matter, and which, perhaps, may be considered as metamorphosed pus.

We can, it is true, not be quite sure that the original product of inflammation in Case IV. was pus, which, from being pent up, underwent changes leading to what is usually termed caseous matter. The upholders of the 'primary tubercle theory' may say that the inflammation of the tympanum was a tubercular process from the beginning, although

the primary affection of the throat looked exactly the same in the two brothers, and although there was no tubercular family history. I am unable to disprove the arguments based on microscopic examinations, brought forward by the distinguished men who maintain the view of 'primary tuberculosis' of caseous deposits and caseous glands; but I confess that I am not quite converted, and that at all events I am inclined to regard the caseous matter in the tympanum of Case IV. as metamorphosed pus which, had it caused general infection at the time of its primary formation, would probably have caused pure pyæmia, as it occurred in the three other cases, while after the change occurring during a pent-up state of several months it caused general miliary tuberculosis, associated with some ordinary pyæmic conditions, viz. the abscesses in the liver, which were perhaps due to an infection of an earlier period, or to the presence of some unchanged pus in the infecting matter.

There is another point which intrudes itself on my mind. If medical men regard a condition as tubercular, they are apt to lose hope, and with it energy in treatment, while in dealing with inflammatory processes and their products they are more hopeful and more inclined to watch every chance for their patients. Thus in Case IV., with the idea that the disease was inflammatory, most medical men would probably have supported my suggestion that perforation of the tympanic membrane and removal of the exudation were advisable and necessary, while the tubercular view might have led to the apprehension that treatment was useless, and that the operative interference suggested was a bootless torture.

As to the treatment in the two cases of pyæmia terminating in recovery, it is possible that the large doses of quinine with a moderate amount of wine or brandy and food did good, and may in such milder forms of the infection exercise a curative effect, while in severe forms they would be useless.

I ought to add, that although general pyæmia and tuberculosis from affections of the middle ear are rather rare compared with the frequency of the spreading of the inflammation by contiguity from the ear to the meninges and sinuses, and to the brain itself, there are several cases on record by Toynbee, Leberte, Von Troltsch, and others.

position where the tumour is now situated. In her fifth year she observed a small swelling in this place. This subsequently began to grow, and soon assumed such great dimensions that the patient could not stand long, could not lie on her back, and at last could not work. Three years ago she observed a 'sore place' on the lowest part of the growth, and there escaped from it an enormous quantity of serous fluid. Undoubtedly the fluid came from the enlarged lymphatic vessels.

The patient stated further that she had commenced menstruating in her 17th year, and that the catamenia had appeared regularly till her 22nd year, when they had disappeared. She had a very distinct but small *goitre*, which, however, never troubled her.

When she came to the hospital she looked rather pale and anxious, and was so badly nourished and weak that the operation was not undertaken immediately. The eminent surgeon, Dr. Kosinski, Professor of Clinical Surgery in Warsaw, performed the operation with complete success on Oct. 13, 1873. The tumour was so enormous, and there were so many enlarged vessels, which must have been cut through, that the operation was attended with great difficulties and dangers to the patient from the loss of blood, which was unavoidable. Two modes of operation were entertained. In the first the whole tumour could have been removed at once, and all bleeding-vessels tied; or, secondly, every artery might have been tied directly after it was cut, and the mass removed gradually. As the second method would have required profound anæsthesia to be produced, and this might have proved fatal to the patient (for in Poland we are all very anxious about the administration of chloroform), the first method was chosen. The patient was laid on her left side, and anæsthetised. A cut was made round the pedicle of the tumour, and afterwards, by means of a few deep cuts, the whole mass was separated from the body. Blood and a serous fluid flowed very abundantly from the wound and from the growth. The bleeding arteries were very carefully compressed by the assistants, but nevertheless bleeding from the small arteries was very abundant. Fifteen arteries were tied, and the parenchymatous bleeding was stopped with sponges soaked in cold water. Besides these arteries there were many large veins which were bleeding, and some of these required ligature. The wound was 12½ inches long, and was brought together with the interrupted suture; there were laid on it compresses with spirit and

water. The patient, after the operation, was very weak and exhausted; her pulse was thready and irregular; the temperature of the body was 96·5° F.

The growth weighed 33 lbs. without the fluid and blood which escaped during the operation, and which would have weighed at least 2 lbs.

The microscopical examination of the mass showed that it consisted of long bundles of cellular tissue, which was in some places very loose. These bundles contained many spindle-cells, and formed a network the meshes of which

Fig. 2.

contained much fluid, with a great quantity of albumen, and many wandering cells.

As far as I know, the above case is the fifth one in which a tumour of such great dimensions has been recorded in medical literature. The first of them was described by Virchow (*Die krankhaften Geschwülste*), and weighed 32½ lbs.; the second, a scrotal tumour, weighing 40 lbs., was extirpated by Liston; the third by Professor Kitter, in St. Petersburgh; and the fourth, also a scrotal tumour, was operated on by Bickersteth, in Liverpool, and weighed 32 lbs.

After the operation traumatic fever came on. The tem-

position where the tumour is now situated. In her fifth year she observed a small swelling in this place. This subsequently began to grow, and soon assumed such great dimensions that the patient could not stand long, could not lie on her back, and at last could not work. Three years ago she observed a 'sore place' on the lowest part of the growth, and there escaped from it an enormous quantity of serous fluid. Undoubtedly the fluid came from the enlarged lymphatic vessels.

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After the operation traumatic fever came on. The tem-

perature in the evening of the same day was 100° F., and during the next few days it remained very high, on the fourth day reaching 104·5° F., with a pulse of 100–104. At the end of the third week, however, the temperature was normal.

The healing of the wound was long and troublesome, and was not accomplished until six months had elapsed. On the fifth day the sutures were taken away, and the wound was enormous—12 inches long and almost as wide.

The ligatures began to come away on the twelfth day. Not less than eight abscesses were found in the neighbourhood of the wound, and were all opened. On Dec. 19 the patient had a rigor; the temperature was 105° F., the pulse 120, and on the left side of the wound erysipelas appeared, which was not very extensive, and lasted only ten days.

At last, in the month of April 1874, the patient left the hospital in good health, and much strengthened.

Fig. 2 represents the patient after the operation.

XXXVIII.—*A Case of Disordered Nerve Function in an Infant.* By Thomas Smith. *Read April* 23, 1875.

L. C., a girl æt. sixteen months, the only child of healthy middle-aged parents, was under the care of Dr. Chaldecott, who kindly gave me the following history of her case:—

She was a healthy child until she was a year old, when she could walk. At this time she began to suffer from disordered bowels, being occasionally troubled by diarrhœa, but for the most part being exceedingly constipated; at the same time her urine became high-coloured and very offensive; she gradually lost strength, until at last she became too feeble to sit up. During this time she was cutting her teeth rapidly, so that eleven had appeared during the four months of her illness; she had no convulsions. When I first saw her in Dec. 1874, she had been four months ill, her face was pallid, her expression anxious and careworn; she was extremely fretful; she could neither stand nor sit up; her skin was everywhere harsh and dry; on the front of the belly it was dry and

shrivelled, as seen in old women who have borne many children. The pulse was natural, the tongue clean, the respiration normal; the bowels, under treatment, were less constipated than heretofore; her appetite was also improving. Her hair was scanty; indeed there was nothing left of it but a little stubble of irregular lengths. She held her hand to her head, as if suffering from cervical caries, but there was no tenderness over the spine, except in the upper sacral region, where firm pressure elicited some signs of pain. At this spot also there was an indefinite sensation of fulness, but on examining the anterior surface of the bone through the rectum, nothing unnatural could be detected.

There was no paralysis of either sensation or motion, the urine and fæces were normally retained. During the passage of fæces the straining was excessive.

The following curious phenomena were observable:—

The child, who was fretful and irritable in the extreme, could at once be quieted by scratching roughly either the palms of the hands or the soles of the feet; if this were done her face at once assumed an expression of satisfaction, her muscles became relaxed, and in a minute or two the parts scratched began to perspire most profusely; this perspiration continued so long as the scratching went on, and during the process the child would be quiet, even for hours at a time.

The same result could be obtained by scratching the hairy scalp, or by plucking out the hair; the present bald condition of the scalp had been brought about by the child pulling out her own hair for her own pleasure; when I saw the child there was no more hair to pull, but in the early days of her illness she had plucked out the hair by handfuls at a time.

Dr. Chaldecott had treated the child, with manifest advantage, by small doses of calomel and James's powder, and by a draught containing bromide of potassium and hydrocyanic acid; small doses of jalapin with podophyllin had been employed to relieve the constipation. It was agreed to continue the same treatment, with the addition of some nux vomica to stimulate the action of the intestines.

Two months after I saw the child Dr. Chaldecott kindly sent me the following account of her condition:—

'Since Mr. Smith saw the child the same treatment has been continued, and in addition the abdomen has been well rubbed night and morning with cod-liver oil; the child has been kept at rest on her back as much as possible.

'She has improved in every way, except as regards the constipation; all the other symptoms (except a slight tenderness on the sacrum) may be said to have vanished; she is less irritable, and is more child-like; her appetite has improved, the urine is normal and never offensive as it used to be. The whole skin is moist and natural; the soles of the feet and palms of the hands are moist and soft, instead of being harsh and dry; she cannot bear to have them touched.

'The hair is growing well, and she never pulls it out. She now never complains of pain on being moved. She can sit upright without pain; and to-day, at my visit, I allowed her to be put on her feet, and she walked some little distance without pain; the improvement has been gradual and persistent.'

Remarks.—I have brought this case before the Society as an instance of a train of symptoms very rarely observed in infants.

In a young woman the occurrence of disordered or perverted nerve functions, such as occurred in this case, together with obstinate constipation, a tender spine, and physical prostration without any discoverable local lesion, would be regarded generally as symptoms of hysteria; and particularly of that form of the disease which is called spinal irritation.

I would suggest that, notwithstanding the unusually early age of the patient in the case I have related, we may believe that the curiously disordered nerve functions observed were dependent upon a condition of nerve centres similar to that which exists in adults who are suffering from spinal irritation.[1]

XXXIX.—*Scald of the Glottis, with Deposit of a Diphtheritic Membrane, in Pharynx, Larynx, and Bronchi.* By Robert Wm. Parker. *Read April* 23, 1875.

A LITTLE girl, A. R., æt. 3 years and 3 months, was admitted into the Hospital for Sick Children, under the care of Mr. Thomas Smith, to whom I am indebted for per-

[1] This disease has been described by the brothers Griffin; more recently by Dr. Bland Ratcliffe in Reynold's 'System of Medicine;' and by the late Dr. Anstie in his lectures published in the 'Lancet.'

mission to bring the case before this Society. The mother gave us the following history:—

Six days before admission (Feb. 27) the child ran to the fireplace, and put her mouth to the spout of the tea-kettle. The kettle was standing on the hob, but was boiling, for her mother saw steam coming out at the time. The mother is certain the child got water into her mouth, as she saw the child spit it out, and as the lower lip was scalded just above the chin. The child screamed and struggled a great deal. The mother put some butter into her mouth, but she spat it out again. She would not swallow anything that same evening. She slept well during the night, as far as her breathing was concerned, but roused up several times crying with pain. In fact, she was not seen by a medical man for thirty-six hours, so slight were the immediate symptoms.

Feb. 28.—She dozed a good deal; cried with pain in the throat. She took a little milk, but a quantity came back each time she attempted to swallow.

March 1.—She seemed to have some difficulty with her breath to-day. Some bright blood came up through the nose and mouth. She swallowed a little milk and brandy without much trouble.

2.—Her breathing was more rapid. She only slept for about three-quarters of an hour at once. Her cough was croupy to-day for the first time—*i.e.* the third day after the accident.

3.—Much weaker. Cough croupy all day. Her voice became feebler. She dozed at intervals, waking up fighting for breath. She could swallow without any trouble.

4.—She is again weaker. Struggles for breath less than before. There is now very little noise with her cough. Her voice is also weaker. Admitted into the hospital.

Actual condition at noon, March 4.—There is a dry sore, quite superficial, below the lower lip, on the right of the middle line. She is very feeble. Cannot hold up her head. Pulse slightly intermittent, about 160; Resp. 44. Considerable working of the alæ nasi. Extreme pallor, with livid tint in lips, cheeks, and finger-ends. Jugulars very distended. Inspiration and expiration alike laboured and stridulous. She does not cough, or struggle for breath. The voice is quite suppressed; she can only whisper her name. There is great retraction of the hypochondriac regions, and the interspaces are deeply drawn in with each breath. The percussion note in front is quite resonant; sibilant rhonchus heard. At the

bases the resonance is good, but no breath can be heard entering at all. An ice-bag was applied round the neck. There being no abatement at two o'clock—*i.e.* after two hours—tracheotomy was performed. There was not, however, at first, that marked improvement which one expected, so a feather was introduced through the tube into the trachea, and after twirling it round two or three times, I drew up two long pieces of membrane, one of which was tubular and about the size of a small crow-quill. This completely relieved the child. To be brief, I may say that this clearing out of the trachea had to be repeated at intervals, and once or twice I sucked up through a catheter introduced into the trachea mucus and bronchial secretion. The child, however, rapidly got worse. She ceased to take any notice of anything or anybody; lay with her eyes half closed, her mouth open; alæ nasi dilating to the uttermost with each inspiration. Resp. 30–40 per minute. Pulse varying from 130 to 172, irregular.

There was at this time no mechanical obstruction in the trachea; little or no bronchial secretion from the wound, which looked dry and unhealthy, but there was no membrane on it.

Every now and then there was an irritable cough, which was always relieved by directing benzoin vapour into the tube.

During the last six hours there was diarrhœa.

She died thirty-six hours after the operation, from exhaustion and blood poisoning.

The temperature was—

103·5° 4 hours after the operation,
101·5° at 1 a.m. next day,
102·0° at 10 a.m. and remained so.

Post-mortem thirteen hours after death, made by Dr. Barlow:—Lips normal. Tongue normal. Two small eroded patches on hard palate, at junction with the soft.

Fauces, larynx, and æsophagus removed together.

There is no membrane on the anterior surface of the soft palate. The posterior surface of the soft palate is rather swollen, presenting a mammillated appearance from swelling of the glands of its mucous membrane. The tonsils are natural. There is a small patch of membrane on the base of the uvula, and another just above the left arch of the palate. Another piece on the posterior surface of the posterior pillars of the fauces. These pieces are not perfectly separable from the mucous membrane. There is a considerable amount of membrane in front of, behind, and on each side of the epi-

glottis, which is thickened and swollen, as also the arytenoepiglottic folds.

The larynx was split up in front, by continuing the tracheotomy wound, which involved the cricoid and three tracheal rings. There was considerable loss of substance both above and below the vocal cords. There was no membrane actually on the cords, but a small piece was seen in the right ventricle. There was great swelling of the whole interior of the larynx.

Tracheal mucous membrane was intensely red and injected, coarsely granular in appearance, but there was no membrane. This same injection and granular surface extends as far as the tertiary bronchi, especially marked in the right bronchus. In some bronchi were found pieces of thin, reddish, well-formed membrane.

In the lungs patches of slight superficial collapse; the margins of the bases slightly emphysematous. No pneumonia anywhere.

Jugulars were full of dark liquid blood, and the right heart contained some currant-jelly clot.

Other organs healthy.

We had not been able to obtain any urine during life, so a small quantity was got from the bladder after death. It was found to be acid, with an abundant deposit of lithates (hedgehog crystals) and a distinct trace of albumen.

I have said that this membrane was indistinguishable, so far as I could make out with the microscope, from that found in diphtheria, and I would now add that I take it to be identical in its nature. I do not believe that membrane is any *necessary* sequela, either immediate or remote, of a scalded glottis. Firstly, from post-mortem evidence, I find only two cases recorded in the post-mortem records of the London Hospital, and Dr. Moxon only mentions ('Lancet,' Feb. 27, 1875), two cases in his experience at Guy's; and secondly, from clinical evidence. In those who recover from scald of the glottis, how few ever expectorate anything like membrane—a fact which must of course almost negative its presence, judging by the frequency with which it is expectorated in diphtheria after the administration of emetics and other remedies; and again, thirdly, the fact that those parts —lips, tongue, palate, and gums—most exposed to the action of steam, and of the steam too, while hottest, were free from membrane, almost even from visible injury, except in two or three small places, as large as barley-corns and much

the same shape, where the superficial epithelial layers were destroyed. The tonsils were also free from membrane; they were not even swollen.

Then, coming to the glottis, I do not feel sure that hot steam could penetrate at all into the lungs. I imagine that by reflex action the glottis would close against the entrance of noxious vapours into the air-passages, or at all events only allow such a small quantity to pass that, when cooled by admixture with the air already in the lungs and by contact with the bronchial secretion, the steam would be then unable to produce *directly* the mischief described in my paper. It must be remembered, too, that there was no dyspnœa until the third day after the accident, and that tracheotomy was not required until the sixth. These facts would lead me to regard the membranous exudation in this case as something apart from, something superadded to, the scald; in fact, as due to a specific poison acting on an abraded surface, and thence spreading by continuity; they would also prevent my accepting Dr. Payne's view of the membrane being a slough 'resulting from necrosis of the epithelial layer *en masse*.'

Passing from my own case, I find it stated that membranes have formed in cases of foreign bodies in the larynx; also in cases of cut throat; and these would be adduced as instances of the non-specific nature of such exudations. I would like to ask, whether we are less inclined to admit the specific nature of that erysipelas which attacks a freshly amputated breast simply because it follows a surgical operation? Do we take less precautions against its spread, or treat it less vigorously, because previously to the operation one patient had been in the hospital five or six weeks without getting it? And by analogy, then, why should we consider as *non*-specific an exudation which attacks a mucous membrane—always peculiarly liable to this kind of inflammation—simply because it follows either applied violence or some other equally well recognised mechanical injury? On the contrary, ought we not rather to expect its appearance more frequently? All will, I think, however, agree that false membranes in these cases are comparatively rare, and hence, when present, they have unusual significance.

Then, as to the identity of all membranous exudations, and which Bretonneau proposed to call diphtheritic—with a qualifying adjective, such as faucial, pharyngeal, laryngeal, tracheal, &c., &c., according to the part which is either pri-

mirarily or chiefly affected—I decidedly agree with those who teach this doctrine of identity. I have long been struck with the class of cases which for the most part come to the hospitals, and have mentally contrasted them with cases occurring in the country and in private families under similar circumstances. For instance, I have never yet seen a case of genuine sthenic croup (laryngeal diphtheria, as I shall prefer to call it) in a poor, ill-fed, rickety child. I am bound, therefore, to believe that the manifestations of a disease depend in some measure on the patient himself.

Then, again, the poison, which in one case produces what would be called croup, shows itself in another child as diphtheria. A case in point has just occurred in the Children's Hospital.

Jan. 7, 1875.—A girl was admitted into the hospital, under the care of Dr. Dickinson, with typhoid fever, and when in the sixth week of this disease she got laryngeal diphtheria, and had to be tracheotomised. The disease began in this way:—a loud croupy cough, with slight hoarseness; no dyspnœa; no dysphagia; a little redness about the fauces, but not a trace of membrane to be seen; the submaxillary glands not enlarged; no albumen in the urine. Three days later her voice was reduced to a whisper, but still no dyspnœa, no albumen. An emetic was given and the child vomited freely, and brought up by the effort of vomiting a large piece of tough white membrane; other pieces were brought up on the next two days; she now began to get lower and weaker, and on the eighth day from the commencement her breathing became laboured and stridulous, and she got restless and looked anxious, and on the ninth day she was tracheotomised, and greatly relieved. There were now decided traces of albumen in the urine; this became more abundant on the next two or three days, and persisted in quantities from one-fifth, one-sixth, one-fourth for about ten days. She recovered perfectly.

Shall we call this croup or diphtheria? A few days later another little girl in the same ward, who had been in the hospital some time under Mr. Smith for scrofulous disease of the knee-joint, was taken ill. Usually of a very lively disposition, this child was observed to be quieter and less playful than usual, and she refused her food. The condition of her knee would not account for this. After a day or two we found that she was flushed, and that she did not swallow well. She was not feeling sick. There was no rash on the body. Pulse

120. Temp. 104·4° F. There was slight swelling and tenderness of the glands below and behind the angles of the lower jaw. The uvula of a deep red colour and swollen. Both tonsils enlarged and red. There was a patch of membrane the size of a fourpenny-piece on the inner surface of each. The patch on the left tonsil comes close up to the uvula, and extends back towards the pharynx more than the one on the right tonsil.

There is no exudation at corners of the mouth, nor in the nostrils, nor any coryza.

Voice is pharyngeal in quality, otherwise not altered.

No dyspnœa. Very slight difficulty in swallowing. Urine 1030, acid. No albumen.

In eight days from the commencement the membrane had entirely disappeared. The swelling of the throat was subsiding, and the child's general condition was improving. She ultimately recovered perfectly.

All would agree to call this diphtheria, I imagine.

A fortnight later one of the nurses in this same ward got a sore throat. I found the fauces red and congested, and the tonsils large; the left one was spotted with half-a-dozen or more white follicles. Submaxillary glands not enlarged. Three days' absence from the ward, some wine daily, and the local application of a carbolic acid spray, and the throat was quite well again. I ought to say that at this time our wards were not quite as healthy as we could have wished. A part of them was actually undergoing such alterations and purifications as the medical committee, who had been specially requested to report on them, had considered necessary. We were therefore inclined to regard the first case as the result of this unhealthy condition of our ward. But with regard to the second case, whatever the source of the contagion, whether from the former case or from the bad air of the ward, we had undeniably *a different manifestation, and a third* manifestation in the case of the nurse. In all three, however, there were such points of resemblance in the general symptoms that one was bound to admit a common disease arising from a common cause, but modified according to the idiosyncracies of the individual attacked or of the organ implicated.

For my own part I believe that if the first case had not been relieved by tracheotomy, she would quickly have died, and on post-mortem the disease would have been found localised in and confined to the larynx, and demonstrated as *true croup*;

while the second case, had she died, would just as certainly have been called *diphtheria*; and no one I take it, would hesitate to speak of the third case as one of *follicular tonsillitis*, although all three diseases arose from one and the same contagion. I could adduce a number of examples of a like kind did time permit.

I respectfully submit the case to the consideration of the Society, together with my own reasons for regarding membranous exudations in this class of cases as a something superadded to the original disease; and further, my reasons for believing that all membranous exudations have a common cause, the varieties depending upon some peculiarity in the patient affected or the parts attacked.

XL.—*The Cause of some of the Eruptions which have been classed as Hydroa.* By JONATHAN HUTCHINSON. Read May 14, 1875.

MY attention was first attracted to the disease which had been then recently described by M. Bazin under the name of 'hydroa,' during a visit to Paris in 1865. I saw in the Museum of the St. Louis Hospital a well-executed cast representing the arm of a man, covered with small bullæ of a peculiar character and closely resembling, as far as my memory serves me, several of the drawings which I shall have to show in connection with this paper. Having read M. Bazin's description of the disease, I subsequently recognised in practice, at long intervals, eruptions which seemed to fit very well with his statements, and which differed from all other maladies which had received distinctive names. In the Hospital Reports of the British Medical Journal for 1870, Vols. I and II., under the title of 'Report on Hydroa and Allied Diseases,' I published a number of cases, some of which appeared to be closely parallel to M. Bazin's, and others, which although less so, still appeared to stand in some sort of relationship with them. At the date of this Report I had no suspicion as to what I now believe to be the true cause of a majority of these cases, and especially of those which most definitely deserve the name. The cause to which I refer is *the use of the iodide of potassium.*

It has long been a matter of general knowledge in the

profession that iodide of potassium and some allied salts may produce certain pustular eruptions more or less resembling acne, but I am not aware that anyone has described, amongst the occasional consequences of its disagreement, bullous eruptions of the severity which I have to illustrate this evening. Some cases which occurred at the London Hospital, in which the same patient experienced a recurrence of the same hydroa eruption several times after the use of the iodide, first threw light upon the subject. On looking back upon cases which I had observed previously, I recollected one or two in which I had certainly given iodide; another in which the man had confidently asserted, in spite of our inattentive scepticism, that his eruption was due to some medicine which had been given him before his admission into the hospital; and several others in which, since the patient had complained of rheumatic pains, &c., before the rash, there was some degree of probability that iodide might have been prescribed.

It may be well at this point briefly to refer to the special features which characterise the eruption which has been called hydroa. It is, I believe, invariably symmetrical, and is always sudden in its outbreak. It affects by preference the face and fore-arms; but although it never exempts these parts, it may in rare instances occur over the body generally. The eruption consists of vesications or small bullæ, from the size of a shot to that of a pea, or even to the half of a small cherry. These are usually surrounded by an erythematous base, and not unfrequently by a certain amount of swelling of the skin from inflammatory deposit. In its very earliest stage the pimples which are about to develop into bullæ remarkably resemble those of small-pox, but as they run their course very rapidly, the differential diagnosis is soon easily made. The vesications become large, lifting up a very delicate layer of epidermis which presents no umbilical depression, and their contents become gray and opaque but not distinctly purulent.

Although there is no umbilicus, yet a peculiar feature is sometimes assumed by the vesication spreading at its margin, and sinking at its centre, the patch then becoming sometimes as large as a shilling. The appearance produced when this is the case is almost characteristic, but I suspect that this rarely takes place unless the cause of the disease is continued. Amongst the clinical features which complete the description of the disease we must say that it is

spontaneously curable, and that it is liable to recur. Its duration differs much in different cases, and may vary from a few days to several weeks. If I am not mistaken in my theory as to its cause, differences in severity and duration are to be explained by remembering that in some instances that cause is continued in action, whilst in others it is removed. The relapses which are frequently observed must be explained by investigations in the same direction. Not only in its early stage is hydroa liable to be mistaken for variola, but in all periods of its progress it bears much resemblance to some forms of syphilitic eruption, and thus iodide of potassium may be continued, possibly in increasing dose, for the very disease which it has caused.

The following are some of the facts which I have to mention in illustration of the above statements:—

Case I.

A married woman, æt. 37, was admitted into the London Hospital in May 1869, under the care of Dr. Ramskill. Her face and the backs of her hands were covered with papules, which at a later date were surmounted by vesications. She had no eruption on other parts of the body. At first the eruption is stated to have much resembled small-pox, but later on it looked more like syphilitic rupia, although there was comparatively little tendency to ulcerate and scab. There were some sores on her tongue which were considered suspicious of syphilis, and in this doubt iodide of potassium was prescribed. She had taken medicine before her admission, but its composition was not known. The patient was admitted on May 18, and discharged quite well on July 12, no suspicion having been entertained during that time that the iodide had caused her eruption.*

Case II.

A man, æt. 54, was admitted under my own care in the London Hospital, in March 1869. His eruption had then been out three days. It consisted of vesicles about the bases of which there was much thickening. Some of the vesicles

* A coloured portrait of this patient's face and hands was shown to the Society. It illustrates the state of the disease in its later stage, when some of the vesications were almost as large as sixpences and some had scabbed. It may be of interest to compare with this portrait Plate III. of the sixth fasciculus of Hebra's Atlas.

were depressed at the centre, and at places they had become confluent, although for the most part they were discrete. His face was œdematous; the eye-lids red and swollen. The eruption occurred very freely on his face, neck, shoulders, arms, thighs, and legs. There were some on the scalp and some also on his penis. The mucous membrane of his lips and his soft palate were inflamed and excoriated, and his uvula was œdematous. His tongue was furred, he had no appetite, and his temperature was 101°. After a week's stay in the hospital the eruption had almost wholly disappeared, and he felt quite well. No medicine, excepting an expectorant, had been given. In this case, as in the preceding, I did not at the time in the least suspect iodide of potassium as a cause; but I well remember that the man himself insisted that his eruption had been brought out by some medicine that had been given him before his admission.*

Case III.

A young married woman came under my care at the Hospital for Skin Diseases in 1868, for an eruption, of which she had three months previously had an attack that lasted ten days and then disappeared. The first eruption had left a few scars, on the backs of the limbs. She described it as having been 'an eruption of blisters.' When admitted she had some papules which were very suspiciously like syphilis, and the iodide of potassium was prescribed. A week later she had a very copious rash, consisting of opaque puriform bullæ, which varied in size from a pin's head to a three-penny-piece. They occurred on all the extremities, and on the nose, lips, and ears. The backs of the fore-arms were affected, the fronts being exempt. Whilst the eruption was out she had free effusion into one knee-joint, and for this she was made an in-patient. No evidence was obtained to substantiate the diagnosis of syphilis; but as there were several suspicious features in the case, and as it did not occur to me that iodide of potassium might be the cause of the rash, this remedy was several times prescribed. My notes expressly state that the eruption improved when she was not taking specifics. The case excited great interest at the time, on account of the difficulty in assigning any cause for the disease or giving it any definite name. The eruption so closely resembled that figured by Hebra under the name 'Herpes iris' (Heft 6, Tafel 2, Fig. 2), that on several occa-

* A portrait of this man's face and arms was exhibited at the meeting.

sions I showed this portrait side by side with the patient to my class. I ultimately lost sight of her before the eruption was well, as she was annoyed by our enquiries as to syphilis. The eruption was very much better, and my suspicion is that the cause of its non-disappearance was, that we had rarely desisted during any long time from the iodide.*

Soon after the publication of my Report on hydroa in the 'British Medical Journal,' in which all the above cases are mentioned, my attention was drawn to certain unusually severe forms of 'iodide acne,' several examples of which came under my observation. Some of these presented vesications, &c., very closely resembling the eruptions which I had called hydroa. I began strongly to suspect that most of the cases to which I had given this name had been really iodide rashes. The case, however, which afforded the most conclusive evidence, is one for which I am indebted to one of my colleagues at the London Hospital, Dr. Stephen Mackenzie. In this case the iodide was given experimentally, and the eruption, which was severe and characteristic, was produced by it in the most definite manner. A portrait of this patient's eruption has been published in the New Sydenham Society's Atlas, under the title of 'Hydroa from Iodide of Potassium.' The following are the condensed notes of the case:—

Case IV.

J. C., æt. 50, married, admitted into the London Hospital *July* 5, 1871, on account of a papular eruption of rather livid red colour on the face and on the fronts and backs of both fore-arms and hands; no eruption on the skin elsewhere, but Dr. Mackenzie believes there were some raised red spots on the soft palate. There was coryza, frontal headache, dry skin, and temp. 101·1°. She said that some slight blotches having appeared on the face and hands a few days previously, she thought she had acquired venereal disease from her husband, and sought medical advice. The medicine prescribed was followed, after about three days, by the coryza and eruption above described.

Dr. Mackenzie concluded that the case was either one of hydroa or of eruption from iodide of potassium, and having examined the medicine which the woman had been taking, found that it contained this drug; it was discontinued on her admission. Next day (*evening of 6th*) the rash had

* A portrait of this patient's hand and fore-arms was shown to the Society.

faded considerably, and her temp. was 98·8°. It was determined to try the effect of the iodide, which was accordingly prescribed in 10-grain doses with sal volatile, from the evening of the 6*th* to the 8*th*. On the latter day it had to be discontinued, as the eruption was worse; all her other symptoms had returned, and the temp. was 103·4°. The eruption and constitutional disturbance again subsided, and on *July* 17 the temp. was normal.

Aug. 7.—Nothing remained of the eruption save some slight reddish staining at the situations of the spots. She now went into the country for a fortnight, taking an iron mixture, and improved much in health while there, the skin becoming at the same time perfectly clear. A week after her return she again felt unwell, with pains in the chest, loss of appetite, and burning and itching in the skin of the fore-arms and face, followed by appearance of red blotches on the skin of those parts. On showing this eruption to the assistant physician under whose care she had now come as out-patient, iodide of potassium was ordered in 5-grain doses twice daily (*Sept.* 25). This was almost immediately followed by return of all her symptoms, including the eruption, and on *Oct.* 2 she was again made an in-patient. The rash at that date consisted of large flat-topped papules on face, fore-arms and hands. The epidermis was loosened over some of the papules, while others (on the hands) were distinctly bullous. There was no eruption elsewhere on the skin, and none in the mouth or throat. The iodide was now discontinued; the rash at once improved, and at the end of ten days nothing of it remained but staining of skin. She was, however, kept in the hospital for several weeks longer, on account of symptoms which probably depended on emboli in various organs, evidence of which was subsequently found at the post-mortem.

On *Nov.* 21 she expressed herself as feeling quite well again, and it was now determined to make one more experiment with the iodide. It was ordered in 5-grain doses thrice daily in water. A few hours after the first dose (5 P.M. *on Nov.* 22) she complained that she had caught cold; next day she was worse and had a bad headache; on the following day (23*rd*), in addition to the same symptoms, red papules appeared on upper lip, cheeks and temples. On the 24*th* most of the spots on the face contained pus; some were as large as peas; there were similar spots on backs and fronts of fore-arms, and papules on ears; none in mouth

or pharynx. 25*th*. Eruption more advanced, and some of the pustules had coalesced, so as to form larger ones. There was less running from the eyes, but her nose and mouth were very troublesome from constant watering. 28*th*. Eruption very abundant, and bullæ larger; scalp now covered with eruption; conjunctiva congested, and some slight prominences at outer part of each cornea margin. The eruption showed no tendency to disappear anywhere. Patient now begged that the medicine might be discontinued, as she ascribed her symptoms to it; iodide accordingly discontinued. 29*th*. Eruption the same; less headache.

Dec. 1.—Eruption had retrograded; 'whereas yesterday all the spots were bullous or vesicular, to-day scarcely any contain pure pus;' this change was not due to rupture, but to simple retrogression, and now that the fluid had for the most part disappeared, the spots looked like fleshy tubercles, about as large as peas, and pinkish-brown. After this date she improved rapidly, and on the 14*th* she was quite well, except slight elevation of temperature, and the skin showed only a number of scaly stained patches not raised above the surface. Discharged.

A few months later she came in again, and died in a few days; ulcerative endocarditis, contracted mitral orifice, numerous emboli in spleen, kidneys, &c., were found at the post-mortem examination, but no evidence of syphilis.

The above cases will sufficiently illustrate the more severe forms of hydroa which I believe to be in connection with the use of the iodide. It will be seen that I rely upon the fact that the eruptions in the first three cases very closely resembled that of the fourth, in which the influence of the iodide was proved. I might, however, mention many other cases where eruptions, more or less vesicular or bullous were produced by the iodide, but in which they were not so severe as in those above detailed. In looking back I remember also certain very severe cases of eruption of most unusual character, concerning which at the time I had no suspicion, but which I should now incline to regard as iodide rashes. A man whom I had in the London Hospital ten or twelve years ago very nearly died of a most extraordinary-looking eruption, which covered his face and limbs. I had treated him about a year previously for primary syphilis with an apparent cure, and when he came under my care a second time it was for an insignificant relapse of eruption.

For this I prescribed iodide and mercury in combination, and almost immediately afterwards a most severe and general eruption necessitated his admission into the hospital. He was confined to his bed for several weeks. As the eruption had ulcerated early, I thought it a case for the iodide and not for mercury, and I recollect well my astonishment that the iodide appeared to have no influence over it. At length he became so much emaciated, and suffered so severely from diarrhœa, that we suspended all treatment, and on this being done he immediately began to improve. He left the hospital about a month later, quite well. I saw him again a few months after this, and he still remained so. He was covered with scars of the eruption, which were the worst on his face. Both his lower eyelids were drawn down by contraction.

This case had excited great interest whilst under observation, and had been seen by many authorities, amongst others by my friend Professor Boeck, of Christiana. We all agreed that the eruption was a most unusual one. Some compared it to frambæsia; but as we had the clear history of syphilis no one doubted that it was specific, and I believe it never occurred to anyone that we were poisoning the man with the iodide.

A yet more remarkable case, illustrating the power of the iodide in causing ulceration and producing dangerous depression of strength, was under my care in the hospital about eighteen months ago. A married woman, æt. about 50, was sent to me by Mr. Corner, of Poplar, for large ulcers on the legs and other parts, which were believed to be syphilitic. She had been taking iodide before she came in, and was getting worse. There was no clear history of syphilis, but the appearance of the ulcers was such, that after careful examination I felt obliged to agree with Mr. Corner's diagnosis, and to prescribe accordingly. I gave the iodide in larger and steadily increasing doses. It is to be observed that this woman had no bullous eruption; her disease consisted in large ulcers on the legs, with swollen and elevated edges covered with grey unhealthy secretion. After we had continued the iodide for a week longer, some spots appeared on her face, and one of these which had a soft, inflamed and swollen base, something between a small boil and a frambæsia spot, was suspiciously like what we had seen in some iodide of potassium rashes. I was indebted to my colleague, Mr. Waren Tay, for the suggestion that possibly the iodide was making the ulcers worse, and was the main

cause of the woman's illness. At this time she was extremely emaciated, had a dry tongue, and the ulcers on her legs had so extended as to cover almost the whole surface. As soon as this suggestion was made, we of course stopped the drug. The effect, both upon the woman's health and upon the local disease, was unmistakable. In the course of a few days the ulcers began to granulate and assumed a healthy appearance. Some of the ulcers had quite healed, all the sores on the face were gone, and the woman had gained greatly in flesh and strength when, about a month later, she was attacked by erysipelas, of which she died.*

The cause of the symptoms for which the iodide was first given was not in this case very clear. The woman came under Mr. Corner's care for ulcers of the leg of the same character as those for which she was admitted under my care, but she had previously been in the Metropolitan Free Hospital for an abscess in the pelvis. Mr. Corner made a careful examination of her family history, and we came to the conclusion that probably she had not had syphilis.

A few words may here be permitted in reference to the circumstances under which the iodide may disagree. The risk of disagreement is certainly very little in relation to the dose, and seems to be almost wholly due to idiosyncrasy in the patient. The rash frequently comes out almost immediately after the first doses of the drug; thus I have seen both iodide acne and iodide hydroa repeatedly commence within twenty-four or forty-eight hours. In others, however, the eruption does not begin until the patient has taken the remedy for a considerable time, and this is especially likely to happen if the dose has been steadily increased. If the remedy is immediately suspended, the eruption so far as I have observed, very promptly declines. All the more severe and ulcerating forms of eruption which I have witnessed have been when the unsuspected poison-remedy has been continued. There does not appear to be much relationship between the iodide coryza and the iodide rashes. The coryza almost always disappears after a time, although the drug may be continued; but it is quite different with the rashes, which, as just observed, get worse and worse.

In conclusion, I may state my entire belief that there are still a certain number of cases for which 'hydroa' is the

* It has been observed by some of my medical colleagues that patients taking iodide of potassium are especially liable to erysipelas, and that when it does occur to them it is attended with unusual danger.

most suitable name, and which are not caused by iodide of potassium. One such is the subject of a wax cast which was exhibited at the meeting. In this case the patient, Benjamin G., æt. 24, stated that he had had an attack similar to the one for which he came under my care since his childhood early every summer; he never had more than one attack each year, and knew when it was coming on by the occurrence of troublesome itching of the skin. In boyhood the attacks had been more severe than of late years, and used to cover his whole face. Lately his hands had suffered more and face less. When the cast was taken (on the fifth day) the eruption consisted of patches of erythema, on most of which there were vesications; some of the vesications were dried at the centre and spreading at the edges; there were a few small ulcers in the mouth and palate. On the ninth day the eruption was rapidly disappearing. He had never had any form of rheumatism.

There are also some curious cases where patients are liable to recurring attacks in which patches of erythema form on the cheeks and backs of the fore-arms, producing vesications. These, however—although in the regions affected, clinical history, proneness to recur, and readiness of spontaneous recovery analogous to the one just cited—differ from it very definitely in respect to the anatomical characters of the eruption. Indeed the eruption in these cases looks much more like that of erysipelas, but from this again it most definitely differs in symmetry of outbreak and entire absence of tendency to spread.

XLI.—*A Case of Acute Fatty Degeneration of the Heart.*

By T. Henry Green, M.D. *Read May* 14, 1875.

Liliah J., æt. 19, single, a machinist, was admitted into Charing Cross Hospital under my care on Nov. 24 last, suffering from heart disease.

Previous History.—There is nothing of importance in her family history. Five years ago she had scarlet fever. This appears to have been her first illness. The attack was apparently a very severe one, as she was laid up from it, more or less, for six months; but she does not think that any dropsical swelling followed it. After this she states that she was

quite well up to three years ago, when she was for a short time an in-patient at Middlesex Hospital, suffering from shortness of breath and palpitation. From this, however, she soon recovered. Six weeks before her admission to Charing Cross she caught cold, and was confined to her bed for about a fortnight with rheumatic pains in her limbs and fever. This was her first attack of rheumatism. After this she attended for a short time as an out-patient at Charing Cross, under the care of Dr. Bruce, who advised her admission.

State on Admission.—She is tall and delicately made, badly nourished and anæmic. Complains of slight pains in joints, and in præcordial region. States that she suffers from shortness of breath and palpitation on walking fast or going up-stairs. When quiet the last-named symptoms are completely absent. There is no pyrexia.

The heart impinges two inches below left nipple, and in nipple-line. Impulse diffused and distinctly heaving. There is felt at apex a marked pre-systolic thrill, and here also a rough and prolonged murmur is audible. This murmur occurs before the impulse, but extends into, and takes the place of the first sound. This is a marked accentuation of the pulmonary second sound. The pulse is 72, very weak and small, but tolerably regular both in force and rythm. From the physical examination of the heart, the existence of mitral obstruction and regurgitation was diagnosed, and also enlargement of the organ involving more especially the right ventricle.

In the luugs nothing abnormal was discoverable. There is slight cough, unaccompanied by expectoration. She states that a week ago she spat up a small quantity of blood.

Her appetite is bad, and she often suffers from pain and nausea after food. She occasionally vomits; states that she has been troubled in this way, more or less, since her severe illness five years ago. Urine contains a faint trace of albumen. There is no œdema in any part of the body.

She was ordered to be kept in bed. Full diet; and an alkaline mixture, containing nux vomica, to take before food, and iron after.

Jan. 13.—Nothing has occurred worthy of note up to the present time. The slight rheumatic pains in the joints disappeared a few days after admission, and the girl is now considerably improved in health; in fact, although she is still somewhat weak and anæmic, she complains but little,

and arrangments are being made to send her at once into the country.

14.—To-day menstruation has re-appeared. It has been absent since Nov. 1. She complains of feeling very unwell, and is sick.

16.—The menstrual discharge continues, and it has been more profuse than on previous occasions. The girl has been constantly vomiting. She cannot keep anything down. The bismuth, bromide of potassium, morphia, &c., which she has been taking, and the careful feeding, have had no effect in controlling the sickness. She complains of pain in the abdomen, but there is no marked tenderness, and the pain appears to be the result of the constant retching. The temperature keeps normal. She is exceedingly weak and intensely anæmiated. Pulse very small, irregular, and frequent. Extremities cold. Ordered nutrient enemata, champagne, &c.

19.—Symptoms continue unabated. Pulse 160. Extremities cannot be kept warm. Mind wandering. Died towards evening.

Autopsy.—The body was examined twenty-six hours after death; weather freezing. The *rigor mortis* had entirely disappeared, with the exception of slight stiffness of the lower limbs.

The most important morbid appearances were those met with in the heart. The pericardium was natural, and contained only about a table-spoonful of clear liquid. The heart itself was perfectly flaccid. It was considerably enlarged, weighing 13¾ oz. The right ventricle was much dilated, and its walls much thickened, as was also the left auricle. The left ventricle was similarly altered, but to a much less extent. The mitral orifice was contracted and funnel-shaped. The apex of the funnel was about half-an-inch in diameter, and would admit a large fore-finger. The other valves were healthy. The muscular tissue generally was abnormally soft and friable, and had a somewhat uniform opaque appearance. There was no mottling. When examined microscopically, the muscular fibres were found to be in an advanced stage of fatty metamorphosis, the molecules of fat being so abundant that but little of the normal striation of the fibre was visible. After portions of the tissue had been agitated in ether, little remained but the sarcolemma. This change was quite universal, and equally distributed in all parts of the organ.

The aorta was remarkably narrow, and very elastic. The ascending part was about two inches in circumference, but,

beyond the origin of the large vessels from the arch, it was much narrower, admitting only the tip of the little finger. It contained a few small patches of superficial fatty degeneration.

The muscles generally were found to have undergone fatty metamorphosis. Several muscles were examined—those of the limbs and the recti abdominis. Although the degeneration was considerable, it was much less so than that in the heart.

Respecting the alteration in the other organs, it may be stated that they were such as are commonly seen as a result of moderate but long-continued mechanical congestion. The lungs were somewhat tough and firm in consistence, and slightly hyperæmic (brown induration). The kidneys and spleen were hard. The liver was very slightly indurated; the external zone of the acini was pale and opaque, the central deeply congested. The mucous membrane of the stomach was covered with a little tenacious mucus. There was no trace of peritoneal inflammation, or of an acute inflammatory process in any part of the body.

Remarks.—The points in the above case which appear to be especially worthy of note are:—Firstly, the rapid way in which exhaustion and death supervened in a case of valvular cardiac disease, in which the cardiac affection was producing but few symptoms, and in which dissolution resulted without the occurrence of any acute inflammatory complication. Secondly, the extensive fatty metamorphosis of the heart and voluntary muscles, which resulted from the condition of exhaustion induced, and was the immediate cause of the fatal termination.

It must be remembered that the girl, although the subject of valvular cardiac disease, was enjoying comparatively fair health. It is true she was feeble and anæmic, but whilst she kept quiet and was well fed her heart did its work sufficiently well to prevent the occurrence of marked cardiac symptoms. The change from this favourable condition of the patient immediately followed a somewhat profuse menstruation. This was succeeded by, and probably determined, the vomiting, and the girl rapidly succumbed from exhaustion and failure of cardiac power, without the supervention of any intercurrent affection.

The extensive fatty metamorphosis of the heart, which was discovered after death, must have been incompatible with the performance of its function, and its occurrence

must, I think, be regarded as having been the immediate cause of the death of my patient. The occurrence of this fatty metamorphosis is perhaps the most interesting feature in the case. In attempting to explain it, it must be borne in mind that this form of degeneration may result from all conditions which materially interfere with the supply of oxygen to the tissues. In the case under consideration we have throughout anæmia—a condition in which the red blood-cells are not only diminished in number but inferior in quality; and, inasmuch as these cells are the carriers of the oxygen to the tissues, such a condition must be attended by imperfect tissue-oxidation, and if excessive consequently cause fatty tissue-metamorphosis. The condition of anæmia which existed from the commencement of the girl's admission to hospital was very materially increased by the loss of blood during menstruation, and by the inability to retain food; and although there may possibly have been a slight degree of fatty metamorphosis during the whole of this period, I think it cannot be doubted that the extensive degeneration which was found to exist after death was determined by the greatly increased diminution in the oxidising power of the blood, which must necessarily have resulted from the hæmorrhage and the inability to assimilate food.

There is one other circumstance connected with this patient which must have constituted an auxiliary in the causation of the fatty metamorphosis. I mean the condition of her arterial circulation. She was the subject of mitral obstruction, and consequently there must have been some diminution in the blood-pressure in the systemic arteries, and in the amount of blood supplied to the tissues. Her aorta was also small; and this diminution in size, which was probably shared by her arteries generally, must, I think, be regarded as having been partly the result of her valvular disease. There may have also existed some congenital atrophy of the vascular system, such as has been described by Virchow as being frequently met with in chlorosis, and as being often associated with fatty heart.

In conclusion, I would say one word respecting treatment. Although some amount of fatty metamorphosis of the heart may have existed for some length of time, I cannot but regard the extensive degeneration met with after death as having been induced acutely by the sudden loss of blood and inability to retain food. If this acute degeneration could have been prevented, I think the patient would not have died.

As there was this inability to retain food, the only course open would appear to have been transfusion. Had this been resorted to sufficiently early, before extensive damage had been done to the heart, is it not possible that the patient might have been rescued from immediate death, and have been restored to a condition but little inferior to that which existed before the supervention of the acute symptoms?

Since writing the above my attention has been called by my colleague, Dr. Bruce, to a paper by Dr. Ponfick on fatty heart. (Ponfick, 'Ueber Fettherz.' Berliner Klinische Wochenschrift, Jan. 1873.) In this paper Ponfick describes a form of fatty degeneration of the heart occurring in conditions of chronic anæmia and hydræmia. He states that in such cases the most important alteration is found in the blood. The blood found in the cavities of the heart after death is almost perfectly fluid, and of a dirty dull red colour. Owing to the diminished power of coagulation, the blood, on standing, deposits the red and white blood-corpuscles. There is a marked deficiency in the number of red corpuscles and in the amount of fibrin. I much regret that there exists no note of the condition of the blood in the case I have narrated. Had, however, any marked alteration been present, I think it would not have escaped the observation of our registrar Dr. Creighton, and of myself.

XLII.—*Absence of Pulsation in both Radial Arteries, the Vessels being full of Blood.* By W. H. Broadbent, M.D. *Read May* 14, 1875.

Henry H., æt. 50, a labourer, was admitted into St. Mary's Hospital May 2, 1874, suffering from ascites and bronchitis with emphysema. He had been at one time a sailor, had lived intemperately, and had had syphilis, but for many years had been steady and temperate.

Paracentesis abdominis was performed three times; last on June 3; and as after this there was no evidence of re-accumulation of fluid, and the bronchitis was cured, he was allowed to leave the hospital at his own wish.

He returned again on June 25, with recurrent ascites, and remained in the hospital till Jan. 25, 1875, when he insisted on going home to die. He had been tapped in all

fourteen times, and various methods of treatment had been tried for the relief of the ascites, which was due to cirrhosis of the liver.

The interest of the case consisted in the peculiarity of the circulation in the upper extremities, to be described.

There was no pulse at either wrist, but while this was the case the radial arteries could be distinctly felt full of blood. They could be rolled under the finger and followed for some distance along the fore-arm. That the round cord-like object under the fingers was really the radial artery was shown by the fact that when the arm was raised the blood receded, and the artery collapsed and became imperceptible. It should be added also, that from time to time, during the six months in which the case was under observation, a faint flickering pulsation could be detected, more frequently and more perceptibly in the left than the right radial. The flow of blood through the veins of the back of the hand and the fore-arm was vigorous, and the hands were warm and presented no appearance of languid or deficient circulation. The muscular condition of the extremities was good.

An additional interest was imparted to the condition by the statement of the patient that the absence of pulse had been detected (had come on, he said) after he had been thrown from a train in the Boxmoor tunnel thirty years before.

On further investigation pulsation was found to be absent in the brachial and subclavian arteries; present in the left carotid, and feebly in the right; vigorous in the femorals and posterior tibials.

The heart was covered by the emphysematous left lung, and its impulse was feeble; but the sounds were normal, and were heard at the usual situations. No dulness could be detected in the upper part of the chest, and there was no abnormal pulsation here or in the neck; no murmur, no intensification of the aortic second sound. No evidence, in fact, of aneurism or of intra-thoracic tumour. The patient's voice was high-pitched and squeaky, but this was natural to him.

I was unable to frame, or to obtain from physicians who saw the patient, any explanation of the phenomena described, or to find recorded cases throwing light upon them. I have more than once, in intra-thoracic aneurism, met with a similar condition of the circulation—a full artery, with little or no pulsation—in one or other arm, and found it explained after

death by a valvular communication of the innominate or subclavian with the sac. In constriction of the aorta again, universal pulselessness has been described, but I could not apply these observations to the case of absence of pulse in both subclavians with good pulsation in the femorals and the left carotid, especially as I supposed the similar condition in the two subclavians to be due to a single cause.

It was in the hope of obtaining a solution to the problem that I kept the patient so long in hospital, when at the last moment he insisted on going home to die, which he did within a week of his leaving, and before I had ascertained the name of the medical man under whose care he had placed himself. Fortunately, however, this was my friend, Dr. Hermann Jones, who sent the widow to me and enabled me to secure a post-mortem examination, of which the following is an account:—

Heart.—Right ventricle enlarged; no valvular disease; structure fairly healthy.

Aorta appeared slightly enlarged, but not otherwise altered when first exposed; removed for examination, together with a considerable length of the branches rising from the arch, the dissection being made with great care; no obvious abnormality apparent.

When laid open very little disease was found in the internal coat of ascending part of arch, and the walls were perfectly elastic. It was now seen, however, that the orifices of the innominate and left carotid arteries were close together, and that the mouth of the former was exceedingly small. On further examination the innominate was found not only to be narrowed at its origin, but rigid. An atheromatous patch surrounded the mouth of the vessel involving the structures both of the aorta and the innominate; it was hard and brittle without being distinctly calcareous, and separated readily from the outer tunic. Immediately above its origin the innominate enlarged to its usual size, and possessed its normal elasticity. Here, then, was the explanation of the absence of pulse with a full vessel at the right wrist.

Pursuing the examination, it was found that the left vertebral artery, instead of arising from the subclavian, sprang from the arch of the aorta close to the origin of the subclavian, the orifice of which was narrowed to the size of a crowquill by the proximity of the vertebral. Here again atheroma had invaded the constricted orifice and rendered it rigid, while the artery beyond was healthy and of full diameter. The absence of pulsation in the two radials, instead of being

due to a single lesion, was thus caused by a repetition of a precisely similar condition at two separate points.

It will be at once seen how a constriction of the mouth of each of the two arteries with a larger elastic part beyond would neutralise the pulsatile movement of the blood. The narrowed communication would cut off the arteries from the general expansile movement of the aorta, as it would only permit of the passage of a small stream of blood insufficient to distend them; this stream, again, would be rendered more or less continuous by the pressure of the aorta on its contents, and any inequality in the propulsion would be further diminished by the large elastic part of the vessel, on the same principle as the second elastic ball in the ordinary spray-producing apparatus.

There are one or two other interesting points worthy of remark. The peculiarity had its source in a slight abnormality of the origin of the branches of the aorta, the approximation of the left carotid to the innominate, and the origin of the left vertebral directly from the arch of the aorta, close to the left subclavian. This is not uncommon, but it has not hitherto been known to give rise to narrowing of the orifices. In a smaller degree such a narrowing might give a pulse-trace simulating aortic stenosis.

Again, the occurrence of atheroma in an advanced stage at the narrowed orifices, while it was almost entirely absent elsewhere, illustrates the effects of strain in producing disease of the coats of arteries. There must always be additional strain where the cylinder of the aorta is pierced to give off branches, and the blood-stream is diverted, and atheroma is developed here earlier as a rule than elsewhere, but the constriction must have greatly increased the strain, just as there is a more rapid current and greater wear and tear of the banks at a narrow part of a river, and must therefore have been the cause of the unusually advanced atheroma at the orifices.

The remaining post-mortem appearances may be briefly enumerated. Pleura, generally adherent by fine connective-tissue.

Lungs, emphysematous.

Liver small; capsule thick, opaque, and white; surface only slightly irregular near anterior edge; and on section liver substance pale, and not subdivided as in ordinary cirrhosis.

Spleen small; capsule thickened and opaque.

Kidneys about normal size; surface coarsely granular, and capsule adherent; cortex not greatly wasted.

XLIII.—*Case of Dilated Heart, from Valvular Disease: Right Ventricle tapped by error, not only without Harm, but with Relief of the Symptoms.* By GEORGE H. EVANS, M.D. *Communicated by* DR. CAYLEY. *Read May* 14, 1875.

A. B., æt. 27, domestic servant, was admitted into Middlesex Hospital Feb. 23, 1875.

She stated that she had had rheumatic fever ten years ago; and that, about six years ago, she was in St. Mary's Hospital with some affection of the heart, on which occasion leeches and blisters were applied to the præcordium.

The present illness had commenced two months previously, with pain in joints, and distress in breathing.

On admission she was very anæmic, had a distressed expression of face, lay rather on right side than on left, and had great difficulty in breathing. Complained of pain in shoulders, lower part of back, and limbs. There was pain, tenderness and swelling of ankles, knees, and joints of fingers, pain also in hips and shoulders. The area of cardiac dulness was very large, commencing above, in the second interspace, and extending laterally from a little to the right of the right edge of the sternum, to rather beyond the left nipple. The intercostal spaces over the cardiac region were obliterated. The apex beat was most distinct in the fifth interspace, rather without the nipple line. Murmurs were heard both at base and apex.

On the 24th—pulse 108, resp. 42, temp. 100°—a blister was applied to the præcordium, and later in the day three leeches, which appeared to give some relief.

Feb. 25.—Dulness seemed increased, and there was distinct bulging of the chest-wall over the præcordium. Pulse 120, resp. 42, temp. 100·2°.

On the 26th the dulness extended very nearly to the right nipple, the bulging of the chest-wall was more marked, dyspnœa was excessive; there were signs of pleuro-pneumonia of the lower part of the right lung. On a consultation being held, it was decided to attempt to relieve her by puncturing the pericardium. Mr. Hulke inserted a fine trocar and cannula to the depth of about half-an-inch, in a spot in

the fourth interspace, about half-an-inch to the left of the sternum. On removing the trocar a gush of dark blood issued from the cannula; and the instrument was felt to be moved, as if in accordance with the action of the heart. The cannula was almost immediately withdrawn, not more than about a drachm of blood having been removed. During the operation no change was observed in the patient's pulse. After the operation she seemed to be, to a small extent, relieved; at all events, expressed herself as being so. Brandy was freely administered during the next few days.

27.—She has slept at intervals during the night (this was the best night she had passed since admission). The area of dulness has not increased. There is less pain in cardiac region. 10 A.M.—Pulse 108, resp. 33, temp. 101·5°.

9 P.M.—Pulse 120, resp. 36, temp. 101°. There is complete dulness on percussion over the right back, with tubular breathing and œgophony. Respiration is very much impeded.

28.—Has passed a sleepless night. There are signs of effusion at the right base posteriorly. Cardiac dulness not increased. Pulse irregular, but of fair calibre; resp. 48, temp. 102·2°.

March 1.—Not much change in the condition of the right lung. Area of cardiac dulness has distinctly diminished.

2.—Slept better during the night; has less pain; physical signs of back and chest not altered. Area of cardiac dulness scarcely extends beyond the right border of the sternum. On this day it was thought that a pericarditic rub was heard.

On the 3rd it was noted that the cardiac dulness began above, at the third costal cartilage, and did not extend beyond the right border of the sternum. The physical signs at the back of the chest did not alter for the better; on the 4th, dulness of left base was noticed, which extended higher on the 5th. She continued in much the same condition till the 15th, when, at 4 A.M., she was seized with a severe attack of difficulty of breathing, and feeling of distress in cardiac region. Three leeches were applied, after which she seemed relieved. About this time œdema, which had previously been principally noticed in the integument of the back and loins, became marked in her face; on the 17th a very copious, irritable, miliary rash, appeared over her trunk and limbs—her mouth and lips became very sore—œdema of hands and feet followed, and she gradually became worse and worse till death, on March 23.

A post-mortem examination was made on March 24. On raising the sternum, *the heart* (22¾ oz.) was seen to occupy a large area, extending from the left anterior axillary line nearly to the junction of the osseous and cartilaginous ribs on the right side. No trace of a cicatrix could be seen on the pericardium. The pericardium proved to be firmly and universally adherent to the heart wall, most firmly around the base and posterior portion; rather more loosely in front and around the apex. It required, however, careful dissection to remove the pericardium. The heart was greatly enlarged in every direction, the apex rounded. On testing the valves, the tricuspid and aortic were found to be freely incompetent; the mitral, however, only transmitted a small stream of water, a very narrow chink being left between its cusps when the valve was closed. Both sides contained a large quantity of clot. The right auricle and ventricle were much dilated, and their walls thickened; the thickness of the right ventricular wall being from a quarter of an inch to one-eighth. The tricuspid and pulmonary valves were of normal tenuity, their orifices measuring respectively 4½ and 3¼ in. in circumference. The left auricle and its appendix were much enlarged, and the endocardium thick and opaque. The free borders of the cusps of the mitral valve were greatly thickened and modulated, but free from vegetations or calcification. The chordæ tendineæ were thick, and the greatly enlarged papillary muscles were tipped by a dense white layer of fibrous tissue. The endocardium of the ventricle was opaque, and the whole cavity much enlarged. It measured from the apex to the base of the aortic valve 3½ in., and its inner wall was marked by greatly enlarged fleshy columns. The muscular substance was very tough, and paler than natural; it measured 1½ in. in thickness at the base of the heart, and ⅝ in. at the apex. The mitral orifice was 3½ in. in circumference, the aortic 3 in. The right and central aortic valves were shortened, and greatly thickened with rounded free margins; the left valve being of normal size, but thick. A few scattered points of atheroma existed in the aortic lining membrane, but none around or within the coronary arteries, which were of unusually large size.

The right lung was slightly adherent to the chest-wall; a thin layer of false membrane coated the lower lobe; and the pleural sac contained about a pint of fluid. The upper and middle lobes were highly congested, frothy blood-stained fluid escaping from the cut surface. The lower lobe was

dense, and of a dark purple colour, and quite airless from compression.

Beyond considerable congestion and œdema, the left lung showed nothing abnormal.

Liver—nutmeg, with fatty degeneration.

Spleen large and firm.

Kidneys much indurated. Capsule somewhat adherent.

This case seems to be of some interest in more than one respect. It illustrates the difficulty of diagnosis between pericardial effusion and distended heart. In this case we knew that we had a very large heart to deal with; nevertheless the rapid increase in the dull area after admission, and the bulging of the chest-wall, together with apparently considerable muffling of the sound of the heart, seemed almost certainly to indicate fluid in the pericardium.

Further, this case also appears to prove that the right ventricle may be punctured, not only without any ill effects, but with the result of relieving the severe distress produced by an over-distended heart. In this case I think there can be no doubt that the right ventricle was punctured, and a very small quantity of blood withdrawn. The patient, who, before the operation, was almost moribund, rallied after it, expressed herself as being relieved by it, and lived for nearly four weeks, the distension of the heart having gradually diminished.

XLIV.—*Case of Double Fistula in Ano; one treated by the Knife, the other by the Elastic Ligature.* By C. F. Maunder. *Read May* 28, 1875.

Of late years an elastic ligature has been employed for various surgical affections, and more recently Mr. W. Allingham has revived its use for the treatment of fistula. When employed in the latter instance, at least, it is as a substitute for the knife; and the question which is naturally asked is, Which is the more desirable method of treatment?

In March of the present year (1875) a patient was referred to me by Dr. Cockerton, whose case would, I thought, assist in answering the above query.

History.—Mary Ann W., æt. 24, a comparatively healthy person, was the subject, two years ago, of a small abscess in

the right buttock. This opened and closed several times. At length some kind of operation was performed, when it was supposed to have closed permanently. Twelve months ago a similar abscess formed on the left side, and had followed much the same course as the former.

The existence of two fistulæ induced me to use the knife in one instance and the elastic ligature in the other, believing that under no other circumstances could the comparative test be so perfect. Precisely the same conditions of constitution, health, antecedents, and idiosyncrasies could thus alone be insured.

Operation.—March 10. The patient was highly nervous, and refused all interference, unless under the influence of an anæsthetic. On careful examination two fistulæ were found to exist, one on each side of the anus, situated somewhat nearer to the coccyx than to the perinæum, and running from below and behind upwards and slightly forwards. The external orifices were equidistant from the anus, while the internal apertures were similarly situated within the bowel; indeed, I may say that no two sinuses could be more alike.

I severed the one on the right side with the knife, and removed a small portion of overhanging skin; and applied the elastic ligature to the other. The knife wound was then dressed with a strip of oiled lint, and no application was made to the other side.

March 11.—The patient was in great pain, and could not sleep until a hypodermic injection of morphia had been administered. The pain this morning is less severe.

12.—Although the morphia injection was repeated last night, she was unable to sleep by reason of a rather severe starting pain.

13.—Has not passed a good night, but the pain is less severe. Either from timidity, or local tenderness, or both, the patient refused to have the oiled lint removed until I saw her to-day. The bowels have acted. There is some pain on the ligatured side.

15.—Still complains of pain at the seat of the ligature.

16.—Condition the same as yesterday.

17.—There is less pain, but this is still referred to her left side. Yesterday I examined the part, and found the ends of the ligature lying in a groove which they appeared to have cut in the tissues, but which, in reality, would be the floor of the lower ends of the sinus, because, as the loop

severed the roof of the channel, these would necessarily be drawn towards the middle of its long axis.

19.—The elastic ligature came away to-day, on slight traction (nine days after its introduction).

23.—On examining the wounds with the finger the conditions are very dissimilar. That made by the knife is almost on a level with the surrounding parts, while that which is the result of the ligature is a deep groove, having very prominent callous edges like the margins of a chronic ulcer of the leg.

27.—The knife wound is scarcely perceptible to the sense of touch, while the thickening and prominence of the edges of the ligature wound are still marked.

30.—Granulations on both wounds are alike healthy.

April 2.—The knife wound is cicatrised, but that made by the ligature is only partially healed, and still grooved.

16.—The ligature wound, even yet, is not quite closed; its edges are thick, but the granulations are healthy.

28.—The patient, having been poorly lately, has not been seen. To-day the deep groove of the 16th is now a sinus, the edges having united. Lest this should persist, the roof was cut away.

May 10.—The ligature wound is now cicatrised, *five weeks* later than that made by the knife.

No special treatment, either constitutional or local, was adopted. Beyond the introduction into the knife wound of a strip of oiled lint at the time of operation, and its unintentional maintenance there (as above noticed) for forty-eight hours longer than I usually adopt, nothing was done. (As a rule, it is my custom, in a case of simple fistula, to dress the wound only at the time of operation; and on subsequent visits, in order to feel sure that the case is progressing favourably, the introduction of the well-oiled finger along the floor of the sinus is substituted for dressings. I believe this plan causes less irritation, favours more rapid repair, and certainly gives less pain to the patient.)

As a general rule, it would be wrong to endeavour to establish a principle of practice, from the experience of a single case; but as I have already remarked, no test of the efficiency of a method of treatment could be so absolutely trustworthy as when two different operations are performed simultaneously upon the same patient, who is the subject of a similar complaint in corresponding localities. Under these circumstances the history of the above case obliges me to

declare in favour of the knife, as a means of ensuring less pain and quicker restoration to health. The elastic ligature may be reserved for those who will on no terms submit to a cutting operation, as well as for those of hæmorrhagic diathesis.

XLV.—*A Case of Arterio-Venous Aneurism of the Femoral Vessels, caused by a Pistol-shot.* By J. W. Hulke, F.R.S. *Read May* 28, 1875.

THE infrequency and the importance of arterio-venous aneurisms are my apology for bringing a record of the following case before you. The excellent descriptions given of these vascular lesions, now rather more than a century ago, to the Society for Medical Observation and Inquiry, by Dr. William Hunter, who recognised both their varieties, left little to be added to their symptomatology. Perhaps the most important addition in this direction was made by that excellent surgeon, the late Professor Nelaton, who, I think, first drew attention to the value of their continuous, rhythmically swelling murmur, as a distinguishing character, contrasting strongly with the broken, rhythmic murmur of ordinary arterial aneurisms. When present, this mark is, I believe, of much value; but it must be borne in mind that its occasional absence has been placed beyond doubt in cases where other evidence of a communication between artery and vein was conclusive.

The relief obtained in the following case from the uniform support of the whole extremity with an elastic stocking, taken in connection with the very chronic course of the variety where the inter-communication between artery and vein is direct, encourages the hope that similar means will usually suffice for arterio-venous varices in the extremities. Experience has shown that where pressure, direct and on the cardiac side, has effected a radical cure, this has been almost exclusively in recent cases. In the present case it was wholly ineffectual. The great dilatation of the artery made me averse to deligation. Its technical difficulties would have been probably greatly lessened by the use of Esmarch's bandage, but its secondary risks were, I thought, too great for me to advise it, except as a final resource.

A coach-builder, æt. 44, came to the surgical out-patient department of the Middlesex Hospital, complaining of great weakness and painfulness of the right lower extremity, which quite disabled him, and laid him aside from work. The whole limb was swollen, its cutaneous veins were dilated, the leg was eczematous, and there was a small, very painful, superficial ulcer on the shin. My colleague, Mr. Andrew Clarke, looking for the origin of these symptoms, recognised the existence of an arterio-venous aneurism, and had him admitted an in-patient under my care, July 15, 1874.

He said that three years before, when in Missouri, a Derringer, smooth-bore pistol, exploded as he was putting it into his right trowsers' pocket; he fell, and from the sharp pain he felt in the knee he thought the ball had lodged in it. However, in a few moments he was able to get up and to stand. On stripping off his trowsers he found an entrance wound below the right hip, but none of exit, and an hour after the accident he discovered the bullet under the skin at the inner side of the thigh, where a doctor cut it out. Its spherical shape was unaltered. The loss of blood from both wounds did not exceed a wine-glassful, and more, he said, came from the cut made for the extraction of the bullet than from the entrance wound. In a couple of days both wounds had closed. He went out the next morning after the accident, and, except on the first day, he did not strictly keep his bed, but for about one month he hobbled out with a stick or crutch, and then resumed his work.

Two nights after the accident, when the wound had already closed, he was kept awake by pain in the thigh, and he then became aware of an unusual throbbing in it. This his doctor said was of no moment; he was to lie still till it stopped, which, however, had not yet happened. The limb grew weak and painful, and at the end of a year it often gave way under him in walking, making him stumble.

His statement was borne out by the presence of a small scar (that of the entrance wound) 5 inches vertically below the crista ilii, and 4½ inches from the anterior superior iliac spine, level with the upper border of the great trochanter; and of a rather smaller, linear scar (where the ball was cut out) on the inner side of the thigh, 7½ inches below the spina pubis. A line joining these two scars cut the axis of the thigh obliquely, and it crossed the course of the large femoral vessels at a point where the femoral vein usually has passed from the inner side to behind the superficial femoral artery.

From this spot upwards the femoral artery and vein were greatly dilated, the vein was much more swollen than the artery, and it was most so under cover of the sartorius muscle, where the course of the bullet crossed it. At this spot there was a very considerable sinuous bulging of the vein, which so closely simulated an aneurismal pouch that for a little time I hesitated whether it might not be one. The vein in its whole extent pulsated synchronously with the femoral artery, and throughout its entire course a loud, rough murmur was audible. It was a continuous, rough, blowing sound, with rhythmical swell, synchronous with the pulse in the artery. Heard with a binaural stethoscope, it was to me not unlike the roar of a large bellows, and it was positively painful to listen to. A strong purring vibration was felt along the course of the vein. The dilatation, murmur, and the palpable vibration, were observable from the ham upwards to above the groin, as far as the external iliac vessels were accessible. Below the level of the lower scar their intensity quickly diminished. All the cutaneous veins were unnaturally conspicuous. The pulse at the ankle in the anterior and the posterior tibial artery was weaker than in the same vessels of the other limb.

Compression of the femoral artery against the horizontal branch of the os pubis (the only spot where pressure could be made upon the artery alone without at the same time compressing the vein, so greatly was the latter dilated, and so much did it overlay, as it were, the artery) was immediately followed by a diminution in the size of both artery and vein, and by the instantaneous cessation of the pulsation, murmur, and thrill.

The above symptoms left no room to doubt that a communication existed between the superficial femoral artery and its attendant vein, and their greatest intensity at a spot nearly opposite the lower of the two scars indicated this to be the situation of the inosculation.

It could not be determined with the same absolute certainty whether the communication was direct, or through an intermediate, adventitious pouch. I was strongly inclined to think the former; in short, that the case fell under the subdivision of arterio-venous varix, and the history agreed best with this view. I supposed that the bullet had passed between the artery and vein, bruising and fraying their outer surfaces, but not immediately opening their tubes, as was shown by the very little bleeding which attended the

accident; that the track of the ball soon closed, and then the injured spots in the vessels giving way allowed the direct entrance of the arterial blood into the vein.

(Several years ago I saw a case where this would probably have occurred had the patient survived a little longer. A very small revolver bullet had crossed the thigh slantingly from above downwards and inwards, and lodged in the knee, causing intense inflammation, quickly followed by a rapidly fatal blood poisoning. At the examination of the body the ball was found to have passed between the femoral artery and vein, its track being marked by a small ashy-grey slough in their walls, the exfoliation of which had begun. The surrounding tissues were so consolidated and matted, that any extravasation of blood would probably have been hindered. Both vessels were unobstructed.)

My patient's disabled condition made him anxious for some measures to be undertaken for his relief, for he had a wife and two children dependent on him. Ligature of the superficial femoral artery above and below the wound had the advantage of directness and certainty, but its risks were so much greater than those attendant on ligature of the superficial femoral artery for ordinary aneurism that I kept it in reserve as a last resource, and in the first instance made a patient and careful trial of pressure; during several weeks using a Carte's compressor at the groin, alternately with a Skey's tourniquet put on a few inches below. For several days also direct compression upon the spot of inosculation was combined with this pressure at the cardiac side; and a trial was also made of compression immediately above and below the inosculation.

These measures altogether failed to produce any permanent effect on the varix, and notwithstanding every care in applying it, the pressure induced a slight eczema in the groin, which overran the scrotum and penis, and provoked a slight lymphadenitis. The eczema of the leg and the ulcers on the shin meanwhile rapidly improved.

The patient had now become weary of this treatment, and wished me to tie the artery, but his general condition having deteriorated, on 1st Sept. I sent him into the country for a month to recruit, having taught him how to methodically bandage the limb with a linen roller.

He did not return, as directed, on the expiration of his convalescent ticket, but absented himself until Dec. 1, when his leg was more swollen and painful, and a fresh ulcer had

formed on the shin. No appreciable difference was observable in the state of the femoral blood-vessels. He said that the failure of an investment in which he had placed his earnings had compelled him to resume work to support his family, on leaving the Convalescent Hospital at the end of September, but after a short struggle increased swelling and pain in his leg obliged him to again give up.

He remained in the Middlesex Hospital this time until Jan. 11, when his wife had an attack of rheumatic fever, which compelled him to return home. During this second stay direct pressure, alone and combined with pressure on the cardiac side of the inosculation, and with methodical bandaging of the whole limb, was again thoroughly tried. The result, as before, was negative as regards the state of the femoral vessels, but salutary as regards the general condition of the limb.

On his discharge he was supplied with an elastic stocking reaching from the foot to the groin, and a small pad was placed upon the spot of inosculation. I have since then seen him several times. He says that with the uniform and efficient support thus afforded he has been able to steadily follow his employment, with but little inconvenience.

The condition of the aneurismal varix does not appear altered, but the circulation in the leg, and the nutrition of its tissues, is manifestly better. The relief from the stocking is so great that the man himself would reject, and I should not feel justified in advising, any direct surgical interference.

XLVI.—*Acute Pemphigus.* By R. Southey, M.D. *Read May* 28, 1875.

Emma T., æt. 19, a moderately well nourished, slightly built young woman, of average stature, with long and rather slim limbs, dark brown hair, grey eyes, fine features and clear complexion. Expression worn, anxious; manner highly emotional, nervous or hysterical.

History and Habits of Life.—Has been a general servant, but has changed places rather often of late, and seems to have led a somewhat irregular life; for the last four weeks has held a situation in Spitalfields. Hitherto she has enjoyed uninterrupted good health.

Family History.—Both parents alive and healthy, lost one brother from typhoid fever; several of her brothers and sisters, six in all, have died in early infancy.

Present Illness.—On Oct. 28 she first presented herself at the hospital, with a sore on the edge or side of the hand, which she described began like a blister. It was situated on the hand side of the wrist, over the carpal end of No. 5 metacarpal bone, *i.e.* of little finger of right hand. She states that the sore was at first about the size of a threepenny-piece, that it had lasted a week when she first showed it to Dr. Brunton; that it was dark black coloured; it was cauterised.

On Nov. 15 she first felt very poorly; she was feverish, could not eat, had a sore throat, and an eruption all over her face and body; rash came out with much irritation and tingling. It appeared first as small round raised spots, which varied in size from the size of a pea to that of a cob-nut. On Nov. 18 she applied for admission. The larger number of the spots then upon her face, neck, and arms were at that time distinct bullæ.

I did not see her that day, but from what I have been told, the sister of the ward regarded the case suspiciously as one of small-pox, and the house physician prescribed iodide of potassium and bark for her; so that inferentially we may conclude what he thought about it. She had a temperature of 101·2°, and was put into a warm bath, which she much needed, for she was very dirty.

On Nov. 19 I found her covered with blebs or bullæ of various sizes. I was told that the eruption had come out much more copiously after the warm bath. There was a ring of redness round some of the bullæ, but not round the blisters that were most tense, prominent, and full. Upon the thorax, abdomen, and legs the eruption was seen in various stages, from the erythematous patch or flat-topped papule, up to the full-blown bubble blister filled with clear fluid.

Eruption.—Conjunctivæ clear; several bullæ on each cheek, especially two large ones spreading from the inner angles (carunculæ) of both eyes beneath the lower eyelids, others at angles of the mouth, on lower lip and chin.

There were blebs on dorsal and palmar surface (though far fewer on palmar aspect) of both hands, also between the fingers. The arms and legs were especially affected at the flexures of the joints. There were plenty of blisters upon the front, but none upon the soles of the feet. On the back,

thorax, abdomen, and thighs, the blisters are larger, oval, and in some parts confluent, measuring quite an inch across.

Some looked quite pearly and transparent, others presented more opaque contents, while those which were pressed upon or had been rubbed contained a yellowish fluid. The fluid collected from a few in a test tube was alkaline, and was albuminous enough to coagulate entirely by heat. The mucous membrane looked sore and apthous; the tongue was protruded with difficulty, tremulous, much indented at edges, and covered with a viscid yellowish-white fur; her throat was sore, so that she swallowed painfully, and there was a superficial apthous sore situated about the middle of the hard palate, and extending to the velum palati. There were no condylomata, no enlarged or hard inguinal glands, no scars of buboes, but some of the largest blisters were situated in the fold of the thighs, near the genitalia.

Heart and lungs normal. Abdomen empty and retracted, not painful on pressure.

Pulse 117, soft, full, regular. Resp. 24, regular; no abnormal sounds. Temp. 101·7°.

Skin moist and perspiring freely; says she has sweated profusely since Nov. 15.

Appetite none; has taken nothing but warm milk and tea since the 15th.

Bowels usually regular; have been open four times since 15th; twice to-day (18th); motions relaxed.

Urine scanty, light straw-coloured, sp. gr. 1038; no albumen; excess of earthy phosphates, thrown down by heat, dissolved by acid. Catamenia, since their establishment, have been regular but scanty. Last period occurred three weeks ago. The breath was very offensive, and the exudations from the body stank abominably.

Treatment.—Diet—Milk, beef-tea, arrow-root. Brandy, ℥iii; wine, ℥iv, in lemonade. Medicine—effervescing citrate of potash with chlorate of potash, gr. x.; liq. chlori. ♏vii; liq. opii sedativ. ♏v. To be taken every four hours.

For the eruption I ordered a solution of nitrate of silver, 2 grains to the ounce, to be injected into some of the larger bullæ after the contained fluid had been evacuated by pricking them, remembering the recommendation of this given by Dr. Graves in his Clinical Lectures (p. 709, edit. 1864), and the parts everywhere to be swathed in cotton wool soaked in carbolised oil; ℥i, containing ♏xi of carbolic acid.

This treatment and mode of dressing proved very grateful to the patient. The punctured bullæ did very well wherever they were not torn and broken. It might, I think, be successfully pursued in any case less extensive than that I had to treat.

Course and Progress.—After two restless nights she obtained some sleep by the help of the subcutaneous injection of morphine.

She was placed on a water-bed covered with a cradle, wrapped in cotton wool, and kept warm by hot-water bottles. She took fluid nourishment only. Her voice was hoarse, or reduced to a whisper; her mouth very sore, and swallowing always painful to her, but still, three days after admission, decidedly better than when first seen.

Fresh bullæ came out every day. The neck, shoulders, face, and limbs looked better, but the back and buttocks and thighs presented superficial sanious sores, which were excessively painful, and bled whenever the dressings were changed. To render her tortures less, I directed on Nov. 29 that she should be lifted into a warm bath, and thoroughly soaked in this. She remained in the bath, kept at a temperature of 100° F. for five hours, the greater part of which time she slept. She took more food than upon previous days, and to the surprise of her nurses, although having been lifted into the bath in an almost inanimate condition, managed to get out of it with only slight assistance. The sores were again dressed with carbolated oil upon her returning to bed. The warm bath treatment was renewed the next day, Nov. 30, when she was kept under water from 7.30 A.M. to 7 P.M., and left it for bed very reluctantly.

Dec. 1.—Warm bath from 9 A.M. to 7 P.M. The mouth was now much better; voice still hoarse. The legs from the knees downwards, and the arms, with the exception of the axillæ, were nearly healed, red pigmented patches marking the sites of the bullæ. A few fresh places had made their appearance upon the face and hairy scalp and behind the ears, and a few on the chest.

2.—In the bath from 12.30 to 7 P.M. The water was allowed to get too cold, I think, while she slept, and she was confused, slightly delirious, exhausted, and shivering when put into bed. The application of hot-water bottles to her feet, some hot bread and milk, and small quantities of stimulant at frequent intervals during the night, produced

reaction. But her breathing was quick, 30. Pulse 120, full; and temp. 100·2°, on the morning of Dec. 3.

3.—She seemed to be rather hysterical than delirious, but very prostrate; but she swallowed better than on previous days, although complaining that her throat was worse and she was not so well.

The offensive eczematous smell, which had been but ill hid by the odour of carbolic acid, had been much abated by the abundant soaking in the bath she had undergone. The places which were not ulcerated were now dusted over with starch and oxide of zinc powder, the cotton wool dressings with carbolated oil being continued to the still raw surfaces.

Ever since her admission she has passed her urine and motions in the bed voluntarily, from sheer inability to support the pain of sitting on any utensil.

Some urine saved on the first day contained no albumen. The next sample I obtained was on Dec. 4; it was high coloured, turbid, and acid, sp. gr. 1045, contained no albumen, but turned quite black, and effervesced violently upon addition of nitric acid. The urine contained some organic compound, Indican uroxarthin, or some colouring material which decomposed nitric acid, becoming oxidised itself, and leading to great effervescence with liberation of nitric oxide and oxygen.

The further progress of the case may be briefly resumed. For some days the urine continued to contain this blue or black colouring matter; it appeared just when she was in the state of extremest exhaustion, and seemed likely to sink at any hour, when from the soreness as well of the skin of her face as of the interior of her mouth, the very greatest difficulty was to maintain the strength of the patient by getting her to take any food at all into her mouth, and make her swallow it.

By very assiduous attention upon the part of her nurses, she was forced to swallow small mouthfuls of essence of beef and milk, and egg-flip made with brandy and wine.

On Dec. 4 her prostration might be judged by her pulse, which was 141, and scarcely to be felt. Resp. 28. Temp. 100·6°.

Enemata of eggs, beef-tea, milk and brandy, were given morning and night.

Thinking it possible that her nervous prostration might be due to absorption of carbolic acid—for the wide superficial extent of raw surface hitherto dressed with carbolated oil

admits of this idea being entertained—I ordered a discontinuance of the carbolated dressings altogether, and directed the employment of plain olive-oil and linseed-meal poultices to some parts, and the ordinary burn dressing; lime-water and linseed oil (the, so-called, carron-oil) on cotton wool to others.

From this date the improvement became very manifest; although rather peevish and difficult to manage, she gained strength day by day. No fresh bullæ made their appearance. Her mouth healed. The enemata were always retained for several hours; they consisted of two eggs, beef-tea and essence mixed, half a pint in all. Brandy, 1 ounce.

9.—The bullæ ulcers are all healing with the exception of those upon the chest, which are simply oiled and covered with linseed-meal poultices.

I will give you the daily account of her more important functions to judge by.

Dec. 5.—Temp. 100·8°; resp. 28; pulse, 120 to 160, soft, but fluttering and very full.

6.—Temp. 100·6°; resp. 32; pulse, 120; stronger; bowels acted once, and urine passed in fair quantity.

7.—Bad night; smell very offensive; tongue dry and furred. Temp. 100·6°; resp. 30; pulse, 135.

8.—Temp. 99·2°; resp. 26; pulse, 128.

9.—Temp. 99°; resp. 26; pulse, 108, firmer and fuller. General condition improved; speaks better.

10.—Good night. Much improved, but will not take any thing solid to eat. Enemata still continued. Stimulants and milk and eggs taken in large quantities. Sores everywhere healing.

Sample of urine examined still contains the same organic compound which decomposes nitric acid with evolvement of gas and dark colouration. The quantity of this substance is, however, less, and the decomposition does not take place until the urine is heated with the acid.

From this date the patient rapidly improved. In a few weeks she was able to leave the hospital, and I sent her to Walton, where she gained flesh and strength.

She has had no relapse as yet. I saw her a month ago, looking quite well, and I understand that she has taken another situation, which is the reason I am unable to show her to-night as I had wished.

Her case was in all respects a very remarkable one.

Acute pemphigus, as all here must well know, is so rare

a complaint, that Hebra in his lectures, when I attended them thirteen or fourteen years ago, was wont to teach it did not exist except in the imagination of its describers, or as impositions practised by old hospital birds upon young hospital doctors.

But this case was no fraud produced by asbestos dipped in sulphuric acid.

The rash differed only from any ordinary case of pemphigus, that I ever saw before, by its universality. You could not have placed a half-crown anywhere on the body without its touching a bullæ or the sore of one.

The first appearance of a spot was on the side of the hand. Three weeks later she becomes generally ill with fever and anorexia, and then a very abundant crop of eruption comes out, followed by successive crops for twenty-one days. She is treated certainly with iodide of potassium and a hot bath for one day; whether she had been taking iodide of potassium previously to this I have been unable to make out, but it is possible, for she was taking physic of some kind.

It is of course open to dispute whether the case was one of pemphigus at all. The exceedingly valuable communication made at our last meeting by Mr. Hutchinson has opened our eyes to a form of hydroa induced by iodide of potassium, which is at least closely allied to and exceedingly like acute pemphigus.

Call the eruption, however, by what name you please, this will not alter its nature or clinical symptoms. It has marked my patient by universal scars and searings which she will carry with her to her grave, and was attended by symptoms so serious, and prostration so severe, as well nigh put an end to her life.

Indeed, I believe she would have died as persons do with extensive burns, from cold and collapse, or exhaustion from general suppuration, if I had not remembered the good service of the continued hot bath and its employment by my old master, Hebra, under similar conditions.

She lives, however, and the sequel should follow: namely, a recurrence of the eruption sooner or later; if her case be what I had no hesitation in calling it, when she was under my care—Acute Pemphigus.

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